"ESSAYS ON COLONIALISM, INSTITUTIONS AND LEGAL TRADITIONS"

Submitted by

DANIEL OTO PERALÍAS

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Supervisor:

DR. DIEGO ROMERO DE ÁVILA TORRIJOS

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To my family,

To Lola

RESUMEN

El tema principal de la tesis se enmarca en la actual literatura de economía del desarrollo sobre las consecuencias a largo plazo de hechos históricos, con repercusiones en el presente. Se analiza cómo ciertos hechos o acontecimientos históricos han afectado a ciertos factores económicos y sociales, y cómo estos factores se han reproducido en el tiempo afectando a la situación económica actual. Uno de los hechos históricos estudiados es el colonialismo europeo de la edad moderna y contemporánea. Siguiendo la importante literatura sobre este tema desarrollada tras los trabajos seminales de Daron Acemoglu, Rafael La Porta y sus respectivos coautores, se analiza cómo el colonialismo afectó a la distribución de las tradiciones legales de las potencias europeas y el impacto que ello tuvo sobre los sistemas legales y el desarrollo financiero de las colonias. Más específicamente, se estudia de qué manera dicho efecto dependió de las condiciones iniciales existentes en los territorios colonizados. Se muestra que el derecho común inglés (el *common law*) se exportó de una manera desigual a lo largo y ancho del imperio británico, lo cual refleja una política colonial flexible a las circunstancias locales. Allí donde hubo escasa presencia de población nativa y las condiciones climáticas fueron buenas para el asentamiento de los colonos europeos, el *common law* se introdujo ampliamente y contribuyó a la creación de sistemas legales de calidad, con consecuencias positivas para el desarrollo financiero. En cambio, en otras colonias del imperio caracterizadas por una elevada presencia de población nativa, el derecho inglés apenas se introdujo e incluso tuvo consecuencias negativas para el desarrollo legal y financiero. Respecto a la distribución del derecho civil francés, Francia exportó su sistema legal de una manera más rígida y uniforme en su imperio colonial, lo cual concuerda con las particularidades de la política colonial francesa, más centralizada que la británica e inspirada en los ideales de “asimilación”. El resultado de ello fue que la implantación del derecho civil francés tuvo un efecto homogéneo sobre el desarrollo legal y financiero, independientemente de las condiciones iniciales en las colonias. España también exportó su derecho civil de una manera homogénea a lo largo de su imperio, pero el resultado fue más positivo que en el caso francés porque las colonias españolas americanas experimentaron una recepción del derecho civil más gradual y profunda que las colonias francesas, lo que se refleja en que hoy en día dichos

países gozan de un superior desarrollo financiero y de sistemas legales de más calidad. El segundo hecho histórico estudiado es la Reconquista española de los siglos VIII al XV. Este fenómeno puede considerarse una forma de colonialismo, pues el territorio conquistado por los cristianos a los musulmanes tenía que ser posteriormente repoblado (o colonizado). Se muestra que las condiciones y la cronología de la Reconquista afectaron a la distribución de la propiedad de la tierra y al reparto de los derechos jurisdiccionales entre los órdenes privilegiados, llevando a una progresiva concentración del poder político en manos principalmente de la nobleza. Esta concentración del poder económico y político generó "instituciones extractivas" de explotación de la población agraria y, especialmente en la fase de industrialización del país, ello condujo al empobrecimiento relativo de aquellas provincias donde esta concentración del poder era mayor. Mostramos que las consecuencias de la Reconquista, ejercidas a través de la concentración del poder político, explican una gran parte de la variabilidad actual en renta per cápita existente entre las provincias españolas.

ABSTRACT

The main topic of analysis of this thesis is framed in the current literature of economic development about the long-term consequences of historical events, which have implications for current economic performance. It is analyzed how some historical facts influence specific economic and social factors, and how these factors persist over time with consequences for the current economic performance of societies. The first historical event studied is European colonialism. Following the important literature originated from the seminal papers of Daron Acemoglu, Rafael La Porta and their respective coauthors, it is analyzed the way in which colonialism affected the distribution of European legal traditions around the world and its impact on legal and financial development of the colonial societies. More specifically, we explore the extent to which the effect of legal traditions on legal and financial outcomes depends on the initial conditions existing in the colonies. It is shown that the British common law was exported in a heterogeneous way across the British empire, which reflects a colonial policy that was flexible to local conditions. In those sparsely populated places at the time of colonization and with a temperature climate for European settlers, the common law was well implanted and led to the creation of effective legal systems and developed financial markets. In contrast, in those colonies characterized by a high indigenous population density, the common law was superficially introduced and even had negative consequences for legal and financial development. Regarding the distribution of the French civil law, France exported its legal system in a rigid and uniform way across its colonial empire, which reflects the particularities of the French colonial policy, more centralized and inspired in the ideal of “assimilation”. As a result, the implantation of the French civil law had a homogeneous effect on legal and financial development, which was not related to initial conditions in the colonies. Spain also exported its civil law in a homogeneous way across its empire. The result was more positive than in the French case because Spanish American colonies experienced a more gradual and deeper reception of the civil law than French colonies. Consistently, we observe that former Spanish colonies enjoy today higher levels of legal system quality and financial development. The second historical event studied in this thesis is the Spanish Reconquest in the Middle Ages. This phenomenon can be considered as an example of

colonialism, since the conquered territory by the Christian kingdoms was subsequently repopulated by Christian settlers. It is shown that the conditions and timing of the Reconquest influenced the concentration of land and jurisdictional rights in the hands of the nobility. This concentration of economic and political power led to “extractive institutions” to exploit the landless peasantry. When Spain began its industrialization process, this fact provoked that provinces featuring an unequal distribution of economic resources and political power fell behind in income levels. We provide empirical evidence consistent with the fact that the consequences of the Reconquest, through the channel of political power concentration, can explain a great deal of the existing income disparities among the Spanish provinces.

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CHAPTER 1: INTRODUCTION

The present thesis can be framed within a growing body of research that considers economic development as a long-term process with deep historical roots. Many factors associated with economic prosperity such as political and economic institutions, legal rules, inequality or human capital levels are largely the result of historical processes whose origins go far back in time (Nunn 2009, 2014; Spolaore and Wacziarg 2013). This new research agenda tries to identify in history the ultimate causes of the current economic performance of societies. It is not simply a matter of economic history. Rather, the main objective of the analysis is to explain the relationship between past historical facts and current economic performance. More precisely, it is studied: a) how some historical events influence specific economic and social factors, b) how these factors evolve and persist over time (perpetuating the situation originated by those historical facts), and c) the way in which these factors ultimately affect current economic outcomes. In this context, historical events are considered critical junctures which create some kind of path dependence.

Throughout the text, two important historical events are analyzed: colonialism and the Spanish Reconquest. Regarding the former, it has been widely studied by the literature since the seminal papers of La Porta et al. (1997,1998), Engerman and Sokoloff (1997, 2000) and Acemoglu, Johnson, and Robinson (2001, 2002). The great interest shown by the recent literature with respect to colonialism can be explained by the fact that it is regarded as a "quasi-natural experiment" where we can learn important lessons about the effect of institutional changes. The analogy with "experiments" comes from the fact that institutional and social changes introduced by colonialism were exogenous to colonial societies. As pointed out by Michaels (2009), the "ingenious idea" of La Porta et al. (1997, 1998) to solve the endogeneity problem between institutions (in this case, legal rules) and economic performance was "to look at settings in which law was not co-original with society but instead was imposed as an external factor", which they found "in the context of colonization, where law was […] imposed externally by the colonizing power, with a random distribution of different legal systems depending on which European country colonized parts of the non-European world." (p. 769). The second historical event analyzed in this thesis, the Spanish

Reconquest, can be also considered as an example of colonialism. The Christians of northern Spain conquered and colonized the Muslim lands of southern Spain and imposed their people, customs and institutions. Interestingly, this case is a clear example of colonialism with assimilation: the new territories were assimilated by the conqueror, as also happened, for example, with the conquest of the Canary Islands. By using the same argument about exogeneity associated with colonialism, we use the Reconquest (and the subsequent repopulation or settlement) as a source of exogenous variation in institutions across the Spanish provinces.

The rest of the introduction is an overview of the content of this thesis. Regarding colonialism, in the second and third chapters we analyze the distribution of legal systems around the world by the European colonial powers and its consequences for financial development and legal system quality. With respect to the Reconquest, in Chapter 4 we explore how the repopulation process created heterogeneity across the Spanish provinces in the concentration of economic and political power and the way this concentration of power has affected the current regional income distribution.

Chapter 2 tries to contribute to the question of why some countries have a well-functioning financial system and others do not. A very influential explanation is the *law and finance theory*, which emphasizes the role of legal institutions as an important engine of financial development. It is commonly believed that the British common law tends to support the protection of property rights of private investors vis-à-vis the state to a much larger extent than the French civil law, with positive ramifications on financial development. Another widely held theory (the *endowment theory*) focuses on the initial conditions existing in colonized territories. Factors such as disease environment, indigenous population density or resources abundance determined the colonial strategy of Western powers and shaped the incentives to create different types of institutions. We argue that the *law and finance theory* and the *endowment theory* are not mutually exclusive because they both explain in different ways the influence of colonialism on national legal systems and more particularly, on those institutions that enforce private property rights and contracts (Beck, Demirgüç-Kunt, and Levine 2003a). We then go one step further by asking whether the effect of legal traditions on finance is conditioned or not by the level of endowments. It is found that the effect of the common law on finance depends negatively on initial endowments, whereas the

effect of the French civil law is constant irrespective of initial endowments. On the one hand, we argue that the common law works optimally when it is well implanted by European practitioners, as occurred in the settler colonies of North America and Australasia. In these sparsely populated places at the time of colonization, property rights and private contracts were enforced and financial markets could prosper. However, in large parts of its empire, Britain conducted a colonial policy known as "indirect rule" which did not intend to effectively introduce its legal system, particularly in territories politically organized or extensively occupied by native population, like Sub-Saharan Africa (Zweigert and Kötz 1998). Rather, local rules were left almost intact and political and judicial powers were concentrated in the hands of traditional chiefs. This led to the control of economic resources by elites, with little incentive to protect property rights and enforce contracts, thus rendering underdeveloped financial systems. On the other hand, France conducted a very different colonial policy based on the ideal of legal and cultural assimilation and a centralized conception of its colonial empire, which was considered as an intrinsic part of the Republic (Fieldhouse 1966, Zweigert and Kötz 1998). The result was the imposition of the Civil Code in a more rigid and uniform way, which led to a more homogeneous effect of the French civil law on legal and financial systems across colonized territories. The findings indicate that initial endowments play a different role in each legal tradition. The British common law produces worse outcomes in territories with larger endowments, whereas the French civil law leads to similar results irrespective of the level of endowments.

Chapter 3 deepens into the key aspect of the distribution of legal traditions around the world. It brings additional insights into the core of the Legal Origins Theory that focuses on the relationship between legal traditions and legal rules and regulations by arguing that the process of distribution of legal traditions from origin countries to colonies is crucial to understand that relationship. Legal families were transferred from only few mother European countries to the rest of the world. An assumption made by the Legal Origins Theory is that the essential characteristics of each legal tradition remain both in origin and transplanted countries, and also implicitly that the implantation was homogeneous across countries within the same legal tradition. By doing so, the literature so far groups countries together according to their legal traditions and analyzes how these legal families are related to different aspects of a country's legal system. This work contributes to the Legal Origins Theory by showing

that the relative legal rules and outcomes (in terms of creditor and investor rights, credit information, legal system efficiency and regulatory burden) of the British common law vs. the French civil law are associated with the colonial strategies followed by mother countries when implanting their legal systems in their colonial dominions. We argue that the distribution of legal traditions was highly heterogeneous, with initial endowments in colonized territories being the key factor explaining this diversity. On the one hand, the transplantation of the common law was inversely related to the level of population density at the time of colonization. This was due to the nature of British colonial policy, which did not want to interfere with preexisting native law and rules of indigenous societies (Zweigert and Kötz 1998; Glendon, Carozza, and Picker 2008). We empirically investigate the link between precolonial population density, the form of colonial rule in British colonies and postcolonial legal outcomes. On the other hand, France imposed its civil law rigidly across its empire, leading frequently to conflicts with existing laws. Since this colonial policy was largely independent of the particular circumstances of the colonized territories, the distribution of the French civil law across colonial dominions was more uniform than in the British case. In addition, as a related question to the distribution of the French civil law, we support the view that former Spanish colonies deserve separate treatment since they share a common Castilian law legacy and a different adoption of the Civil Code by imitation. Both characteristics warn against mixing these countries with those colonies where the French civil law was implanted by France itself. Former Spanish colonies experienced a better assimilation of the civil law and, therefore, one expects better legal outcomes for this group compared to French colonies.

Finally, Chapter 4 explores the economic consequences of the Spanish Reconquest in the Middle Ages. This historical event is considered as a “quasi-natural experiment” to analyze the long-term effects of the concentration of political power on economic development. Different factors such as the total area conquered in each stage of the Reconquest or the military and political conditions prevailing in the Christian kingdoms, led to distinct types of colonization, which in turn affected the type of political institutions established, the distribution of economic power and the associated political equilibrium among the agents involved in that process. In northern Spain, whose conquest was slow and occurred earlier, economic resources (in the form of land) and political power were better distributed among settlers and a more egalitarian society

of farmer class emerged. By contrast, in the southern territories conquered later, the repopulation process was monopolized to a large extent by the powerful nobility and the military orders, resulting in a society characterized by a highly unequal distribution of *de facto* and *de jure* political power favoring these groups at the expense of individual settlers. These initial differences in the patterns of distribution of economic and political power persisted over time and led to divergent development paths among the Spanish provinces. Our basic argument is that: a) the conditions and timing associated with each stage of the Reconquest determined the type of political and economic institutions established in each province; b) the alleged relationship, which is due to a matter of circumstance, is not associated with any feature related to the economic potential of the territories, and hence the Reconquest can be used as an exogenous source of variation in the allocation of political power and its subsequent effect on political institutions and the distribution of resources in society; c) the specific configuration of *de facto* and *de jure* political power distribution in favor of the landed nobility, which persisted over time and generated extractive institutions to exploit the landless peasantry, ultimately influenced the pattern of development of the Spanish provinces. The results indicate that political power concentration (a composite indicator of *de facto* and *de jure* political power) has high explanatory power for accounting for the current levels of GDP per capita in the Spanish provinces.

CHAPTER 2: LEGAL TRADITIONS AND INITIAL ENDOWMENTS IN SHAPING THE PATH OF FINANCIAL DEVELOPMENT

This chapter finds remarkable heterogeneity in the relationship between legal traditions and finance in former colonies. The effect of the British common law on financial development is conditioned by the level of initial endowments. In former colonies with low precolonial population density the common law has promoted high financial development, but where endowments were abundant this legal tradition has not worked well. In contrast, the effect of the French civil law on finance is invariant to endowments. British common law countries do not exhibit greater financial development levels than French civil law countries when endowments are sufficiently high.

2.1. INTRODUCTION

Many economists have stressed the pivotal role of the financial system in the process of economic development.[1] As a result, a growing number of studies have sought to explain why some countries have a well-functioning financial system and others do not. A very influential explanation is the *law and finance theory*, which emphasizes the role of legal institutions as an important engine of financial development. It is commonly believed that the British common law tends to support the protection of property rights of private investors vis-à-vis the state to a much larger extent than the French civil law, with positive ramifications on financial development. Another widely held theory focuses on the initial conditions existing in colonized territories. Factors such as disease environment, indigenous population density or resources abundance determined the colonial strategy of Western powers and shaped the incentives to create different types of institutions. Beck, Demirgüç-Kunt, and Levine (2003a) relate the *endowment theory*

[1] Levine (1997, 2005a) provides authoritative reviews of the theories and empirics behind the finance and growth nexus. Using a deterministic nonparametric production frontier approach, Badunenko and Romero-Ávila (2013) find evidence that financial development accounts for up to 20% of labor productivity growth over the period 1965-2005.

to financial development by arguing that sound private property rights protection is key to financial contracting, which is a prerequisite for financial systems to develop.[2]

The *law and finance theory* and the *endowment theory* are not mutually exclusive because they both explain in different ways the influence of colonialism on national legal systems and more particularly, on those institutions that enforce private property rights and contracts. Beck, Demirgüç-Kunt, and Levine (2003a) provide empirical evidence that both theories matter for financial development. We go one step further by asking whether the effect of legal traditions on finance is conditioned or not by the level of endowments. It is relevant to study whether the British common law and the French civil law work better in some countries than in others depending on their initial endowments. In fact, Ross Levine (2005b, p. 84) poses the following question: "do the law and endowments interact?" Given that the French civil law is associated with worse institutions than the British common law, he suspects that the negative effect could be particularly large in territories with adverse endowments. To our surprise, these interesting questions have not yet been addressed in the literature.

This chapter tries to fill this gap by testing the presence of heterogeneity in the interaction between legal traditions and endowments. Particularly, we expect the effect of the common law on finance to depend negatively on initial endowments, whereas the effect of the French civil law is expected to be constant irrespective of initial endowments. On the one hand, we argue that the common law works optimally when it is well implanted by European practitioners, as occurred in the settler colonies of North America and Australasia. In these sparsely populated places at the time of colonization, property rights and private contracts were enforced and financial markets could prosper. However, in large parts of its empire, Britain conducted a colonial policy known as "indirect rule" which did not intend to effectively introduce its legal system, particularly in territories politically organized or extensively occupied by native population, like Sub-Saharan Africa (Zweigert and Kötz 1998). Rather, local rules were left almost intact and political and judicial powers were concentrated in the hands of traditional chiefs. This led to the control of economic resources by elites, with little incentive to

[2] The original contributions regarding the *law and finance theory* correspond to La Porta *et al.* (1997, 1998) and those relative to the *endowment theory* are Engerman and Sokoloff (1997, 2000) and Acemoglu, Johnson, and Robinson (2001, 2002).

protect property rights and enforce contracts, thus rendering underdeveloped financial systems. On the other hand, France conducted a very different colonial policy based on the ideal of legal and cultural assimilation and a centralized conception of its colonial empire, which was considered as an intrinsic part of the Republic (Fieldhouse 1966, Zweigert and Kötz 1998). The result was the imposition of the Civil Code in a more rigid and uniform way, which led to a more homogeneous effect of the French civil law on legal and financial systems across colonized territories. This indicates that initial endowments play a different role in each legal tradition. The British common law produces worse outcomes in territories with larger endowments, whereas the French civil law leads to similar results irrespective of the level of endowments.[3]

Table 1 (Panel A) provides some preliminary evidence on this issue. Rows present former colonies classified according to their legal traditions. The first two columns show the mean values of our main financial indicator (private credit over GDP) for colonies with population density in 1500 below and above the median. The third column reports the *t*-statistic of mean differences. For the full sample of colonies, those with greater precolonial population density have, on average, a level of private credit about 20 percent of GDP lower. The difference appears highly significant, which fits well with the *endowment theory*. Moreover, the last column shows that British common law countries exhibit higher financial development than French civil law countries, which is also consistent with the *law and finance theory*. However, both patterns vanish when legal traditions interact with endowments. Interestingly, only common law countries fit well with the *endowment theory*, as given by significantly lower financial development for a level of endowments above the median. In contrast, French civil law countries exhibit a level of private credit largely independent of initial endowments. These patterns are supported by Figure 1 that shows that endowments only play an important role in common law countries but do not in French civil law countries. Returning to Table 1, another remarkable observation can be made: the common law is not always associated with higher financial development, since civil law countries have

[3] Oto-Peralías and Romero-Ávila (2013) provide preliminary evidence that the differing systems of colonial administration implanted by France and Britain as a response to initial endowments conditioned the subsequent institutional development of former colonies.

a higher level of private credit (0.24 versus 0.17) for population density above the median.

TABLE 1
LEGAL TRADITIONS, INITIAL ENDOWMENTS AND FINANCIAL DEVELOPMENT

	Private Credit: mean values			
	Less than or equal to the median of population density in 1500	Greater than the median of population density in 1500	Mean differences (*t* -statistic)	All colonies
Panel A: Comparing British common law and French civil law countries				
All colonies	0.41 *52*	0.22 *48*	0.20 (3.257)	0.32 *100*
- British Common law	0.65 *25*	0.17 *15*	0.47 (4.186)	0.47 *40*
- French civil law	0.20 *27*	0.24 *33*	-0.04 (-0.924)	0.22 *60*
Panel B: Distinguishing among French civil law countries				
• Implantation by France	0.09 *9*	0.19 *15*	-0.10 (-1.866)	0.15 *24*
• Spanish law legacy	0.28 *9*	0.29 *9*	-0.01 (-0.083)	0.29 *18*
• Others	0.22 *9*	0.26 *9*	-0.04 (-0.481)	0.24 *18*

NOTES: Dependent variable is private credit by deposit money banks and other non-bank financial institutions over GDP. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). The number of countries appears in italics.

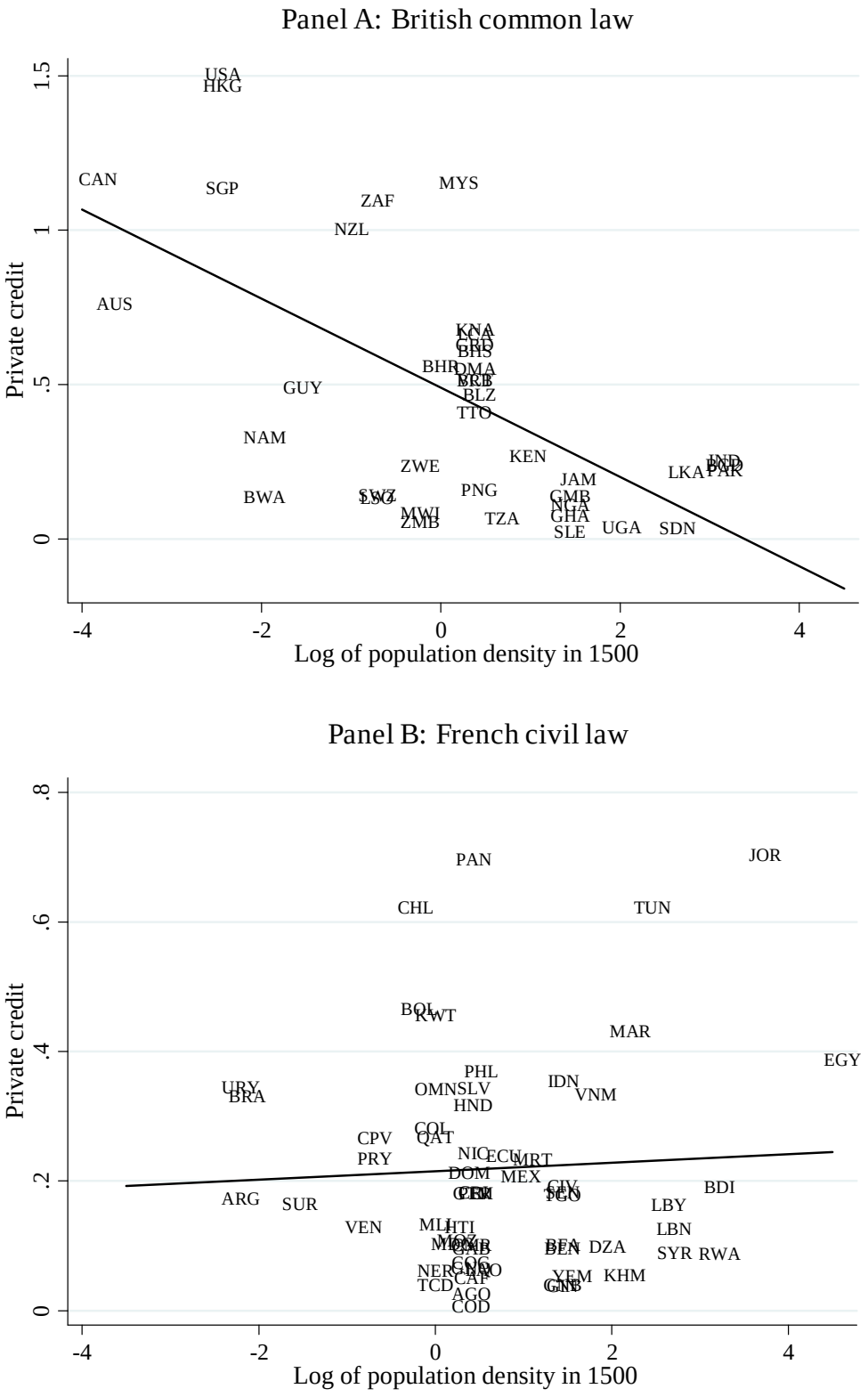

FIG. 1. Legal Traditions, Initial Endowments and Financial Development.

This study makes another contribution by providing evidence for the need to divide the wide group of colonies labeled as French civil law into three categories, according to the way the civil law was transmitted to the recipient country. The first category brings together colonies obtaining the French civil law by France itself. The second consists of the former Spanish colonies, while the third group comprises the remaining colonies. As detailed below, their historical experiences are very different and there are reasons to believe that the reception of the French civil law varies from one group to another. More specifically, the Spanish American colonies share the Castilian law legacy and the adoption of the Civil Code by imitation, aspects that facilitated the reception of the French civil law. Thus, we expect former Spanish colonies to have higher financial development than former French colonies. In line with our predictions, Table 1 (Panel B) shows notable differences in financial development among the three French civil law groups, with the 'Spanish law legacy' group almost doubling the financial development level of the 'implantation by France' group.

This preliminary evidence is extended below with the estimation of cross-country regressions for a sample of 100 former colonies. An interaction model is proposed to explain financial development through legal traditions, endowments and their interaction. The analysis is formulated in terms of five main hypotheses and gives consistent support to our theory-based predictions: 1) the effect of the common law on financial development is influenced negatively by the level of initial endowments, 2) the effect of the French civil law on finance does not depend on initial endowments, 3) there is heterogeneity in the interaction between legal traditions and endowments, 4) the common law is not always related to higher financial development since the French civil law equals the common law when the level of endowments is sufficiently high,[4] and 5) there are significant differences within the French civil law tradition, in

[4] Throughout the analysis, when we talk about high levels of endowments we either refer to high precolonial population density (implying abundance of indigenous labor), high mineral resources abundance, land suitability for plantation crops or to high settler mortality. According to the *endowment theory*, a common feature to all endowments is that they are fundamental factors for explaining the colonial strategies followed by Western powers. High levels of endowments are generally associated with low European settlement and the prevalence of extractive institutions aimed to exploit the resources of the colonized territories.

particular, former Spanish colonies are associated with more financial development than French colonies.

The remainder of the chapter is organized as follows. Section 2 reviews the *law and finance* and the *endowment* theories. It also formulates some plausible hypotheses that result from interacting legal traditions with endowments and from categorizing French civil law countries into three groups. Section 3 describes the empirical strategy and the data used. Section 4 presents the basic regression evidence as well as the results of extensive robustness checks. Section 5 puts forward some implications and concludes.

2.2. THEORETICAL AND HISTORICAL BACKGROUNDS

2.2.1 Law and finance theory

The *law and finance theory* stems from the pioneering work of La Porta *et al.* (1997, 1998), who trace the relationship among legal traditions, legal institutions and financial development. Beck and Levine (2005) decompose the *law and finance theory* into two broad propositions. First, financial development is promoted when legal institutions guarantee private property rights and enforce contractual arrangements. Second, countries' legal traditions can account for differences in current legal systems and financial development. Through conquest, colonization and imitation the British common law and the French civil law spread around the world. Both legal families exhibit different features, which can be traced back several hundred years to the British and French revolutions or even earlier (Klerman and Mahoney 2007, Glaeser and Shleifer 2002). Unlike the French civil law, the common law is thought to be more respectful with private property rights and private contracts, to be less supportive of government regulation and to promote the independence of the judiciary (La Porta, Lopez-de-Silanes, and Shleifer 2008). Two mechanisms explain the superior performance of the British common law: the "political" and the "adaptability" channels. The first implies that legal traditions differ in the weight assigned to private property vs. the rights of the State, while the second focuses on judicial formalism and the ability for each tradition to evolve. The historical victory of the coalition among the English Parliament, bourgeoisie and judges against royalists in the English civil wars in the seventeenth century promoted the protection of private property rights. Moreover, the case-law principle, based on the judicial precedent, provided Britain with a legal system that could easily adapt its law to changing circumstances (Beck and Levine 2005). In

contrast, in the French Revolution the principle of separation of powers relegated judges to a secondary role of mechanical application of the law, while the state's powers were strengthened. Beck, Demirgüç-Kunt, and Levine (2003b) provide an empirical evaluation of these two mechanisms, finding evidence more supportive of the "adaptability channel".

Merryman (1996) states that despite the emphasis made on the principle of separation of powers and the subordination of judges to the legislator in the French revolutionary period, soon after the situation would be relaxed and French courts would be granted the power to interpret laws. However, "when the French exported their system [to their colonies] they did not include the information [saying] that it really does not work that way" (p. 116), thus hindering the development of the judicial system in many developing countries.

When the *law and finance theory* is applied to former colonies, the massive transplant of legal systems by Western powers is considered to be an extraordinary historical event that has shaped and oriented the legal system of former colonies. European powers introduced statutes, codes, legal principles and court systems, thus determining the particular legal tradition transplanted to colonial dominions. Even nowadays, some authors find legal connections or "contemporary transplants" between origin countries like France and Britain and their former colonies (Spamann 2010a).

2.2.2 Endowment theory

Proponents of the *endowment theory* focus on the initial conditions (or endowments) in colonized territories, which influenced the type of political and economic institutions established by European powers. Engerman and Sokoloff (1997, 2000) point out that factors such as indigenous population, mineral resources and land suitable for sugarcane crops led to the predominance of large scale-plantations and mining in the New World, which originated highly unequal societies with institutions biased to privilege the elite. In contrast, North America was sparsely populated and lacked conditions for large plantations. This led to colonies of settlement where smallholder farmers of European descent established constitutional systems with a high degree of self-government that was conducive to subsequent economic development. Acemoglu, Johnson, and Robinson (2001, 2002) argue that the economic profitability of alternative colonial policies and the suitability for European settlements are responsible for the colonial

strategy followed. Hence, in those places where European settlement was discouraged by high tropical disease or where the extraction of indigenous resources was favored by the existence of a dense (and relatively prosperous) native population, extractive institutions were established. This would lead to a reversal of fortune, since initially sparsely populated territories that received a large European settlement favoring "institutions of private property" would eventually overtake densely populated territories of indigenous majority that were initially more prosperous (Acemoglu, Johnson, and Robinson 2002).[5] Along similar lines, Easterly and Levine (2003) provide evidence that endowments (measured through tropical location, settler mortality and the types of crops and minerals) affect current income levels only through their effect on property rights, even after controlling for legal origin.

Beck, Demirgüç-Kunt, and Levine (2003a) relate the *endowment theory* to finance since in those places where institutions limited executive powers and elites' domination, private property rights could be protected, thus fostering financial development. In contrast, "extractive colonies" hardly generated "institutions that favor the development of free, competitive financial markets because competitive markets may threaten the position of the extractors" (p. 140). The relevant factor was not the short-run effects of exploitation policies, but the long-run consequences of "extractive institutions", which had as a distinguishing feature "a high concentration of political power in the hands of a few who extracted resources from the rest of the population" (Acemoglu, Johnson, and Robinson 2002, p. 1264). This structure of power concentration persisted over time, hindering the emergence of institutions conducive to economic development. [6]

2.2.3 Interacting legal traditions with endowments

Beck, Demirgüç-Kunt, and Levine (2003a) realize that the *law and finance* and the *endowment* theories are not mutually exclusive and provide evidence that both matter for financial development. We go one step further by asking whether the effect of legal traditions on finance is conditioned by the level of endowments.

[5] Bruhn and Gallego (2012) also provide evidence of "reversal of fortunes" for a sample of 345 regions belonging to 17 American countries.

[6] Comparing the development of the banking sector in the U.S. and Mexico, Acemoglu and Robinson (2012) argue that political institutions inherited from the colonial past originated, in one case, a developed and competitive banking system and, in the other, an underdeveloped and monopolistic one.

Comparing the reception of French and British laws, Zweigert and Kötz (1998) state that "French colonial policy always sought in the long run to assimilate the native populations" (p. 113). The pursuit of legal assimilation led the French colonial legislation to encourage the natives to adopt the French law. In contrast, in their words "English policy was different: true to the principle of 'Indirect Rule', English colonial administrators relied as much as possible on existing native rules, kept the local courts decentralized, and left mature native law almost intact" (p. 113). Interestingly, within the British empire Zweigert and Kötz differentiate two groups of colonies: the settler colonies, which at the time of colonization were "unoccupied or occupied only by natives at a very early stage of civilization and not yet politically organized" (p. 220); and the rest, which were colonies previously controlled by native kings or other European powers. In the first group the common law applied mechanically, while in the second the application of indirect rule implied that "to much the largest part of the African population the Common Law is of almost no practical significance" (p. 230).[7]

Whereas the French empire was highly centralized and directly ruled, Britain opted for a system of colonial administration with more flexibility, variability to local conditions and local autonomy, which in many parts of the empire took the form of indirect rule (Fieldhouse 1966).[8] French centralism led to a more uniform application of the law across its empire, while the British showed clear variability in the way the common law was exported to colonial societies. Also, Beck, Demirgüç-Kunt, and

[7] Glendon, Carozza, and Picker (2008) indicate that there was an extensive reception of the common law in territories characterized by the absence of "civilized" local law and the presence of only a small indigenous population. In their opinion, the civil law is easier to receive than the common law because of the "convenience of codes rather than a matrix of case law and statutes, the more complex language of the common law and the ability to accept a Roman based civil law which is private and [poses] little threat to a political system" (Glendon, Carozza, and Picker, p. 174). In previous work, Glendon, Gordon, and Osakwe (1985) point out that the proper functioning of the common law depends on the development of a body of judicial precedents, which is not easy to materialize. In this respect, Joireman (2004) states that the evolutionary nature of the common law is generally true in developed countries but it should not be assumed in poor countries. Kenya, for example, lacks an organized record of legal decisions, which is necessary for the application of the judicial precedent.

[8] The different colonial strategies between the British and the French are well reflected in their ratios of colonial officials to population in the 1930s. This ratio equaled 3,660:15,000,000 for French West Africa, which contrasts with the ratio 1,315:20,000,000 for Nigeria (Kirk-Greene 1980).

Levine (2003a) point out that Britain and France differ in their strategies of implanting the law. Britain applied the common law more flexibly and did not try to replace local laws and indigenous customs, while France imposed its Code rigidly despite conflicting with local customs.[9] Lange (2004) argues that British indirect rule strengthened the positions of traditional chiefs as customary law administrators, which led to abuses of power, control of economic resources by elites and imperfect protection of property rights. Lange uses the colonial dependence on customary courts as an indicator of indirect rule and argues that the degree of indirect rule was related to local endowments such as the disease environment and precolonial population density.[10]

[9] A good account of the variability in the degree of application of the common law by the British to their colonial dominions is provided by Daniels, Trebilcock, and Carson (2011). In Nigeria, where indirect rule was extensively exercised, there existed two parallel courts: colonial courts applicable only to matters involving Europeans and native courts that –under indigenous customs and rules– dealt with all disputes between non-Europeans, who under certain conditions could also appeal to the British court. This dual court system implied that the common law hardly applied to the great majority of the indigenous population. In addition, since native chiefs were granted extensive executive powers by the British, and, unlike precolonial times, were no longer subject to check and balances by the native population, they undermined the historical legitimacy of the native court system as well as the effectiveness of their customary law. Unlike indirectly ruled areas in Africa, India was administered as a "direct/indirect rule hybrid" and managed to gradually adapt the colonial legal system to the needs of the Indian population, which resulted in the creation of "a court hierarchy and a body of law that was both effective and accepted by the native population" (p. 135).

[10] Comparing the direct and indirect rule systems within India, Iyer (2010) finds that areas under direct rule experience significantly lower levels of schooling, health provision and roads in addition to worse poverty and infant mortality outcomes in the postcolonial period. A key to understanding why in this case indirect rule led to better outcomes lays in the fact that hereditary kings had incentives to properly govern their "native states", since they could be removed in the event of misrule. In the case of British India, it is important to distinguish the type of land revenue system in place. Iyer finds that a cultivator-based land revenue system, where the ruler is in charge of collecting the revenue directly from cultivators, produced superior public goods outcomes than a landlord-based revenue system, wherein the revenue collection is carried out by landlords. These results appear in line with those of a previous study by Banerjee and Iyer (2005) that did not include those areas in India under indirect rule. Interestingly, the good performance of the indirect rule exercised by hereditary kings in the native states contrasts with that of the indirect rule applied by landlords in British India, who –unlike the former– were not subject to removal in the case of misrule. Therefore, Iyer's overall results are not that different from those obtained for indirectly ruled

Berkowitz, Pistor, and Richard (2003a, b) argue that the way European laws were transplanted to the colonies is key to explaining the quality of legal systems. Receptive or successful transplants are those that adapt the imported law to local conditions or when the population is familiar with law principles. Under these conditions, countries are able to develop extensive and effective legal institutions. The transplant of the British common law to the colonies was receptive mostly in the settler colonies, and unreceptive in the extractive colonies, as in sub-Saharan Africa. In contrast, the rigid implantation of the French civil law in French colonies led to widespread unreceptive transplants, irrespective of initial endowments. This suggests that the effect of initial endowments on the effectiveness of legal systems varies across legal traditions.

The whole picture indicates that there were different patterns of transplantation of European laws to the colonies. The implantation of the French civil law appeared to be more rigid and mechanical, conducted uniformly across all colonies and was more ambitious, since the final objective was legal assimilation. As a result of this homogeneity in the exportation of the law, one would expect the relationship between the civil law and finance to be largely invariant to endowments across former French colonies. By contrast, the implantation of the British common law was not uniform across former colonies. In those places with a lower level of endowments the common law was extensively implanted and fitted well with the colonial society, which led to the development of legal institutions promoting financial markets. In places with larger endowments where indirect rule generally prevailed, "extractive colonies" were established and the superficial application of the British law barely influenced and even distorted previous legal practices based on customary law.

The previous discussion allows us to draw a set of hypotheses, which will be tested in the empirical section. Regarding the common law tradition, our prediction is reflected in the following hypothesis *H1: The common law leads to higher financial development when the level of initial endowments is low, but at high levels of endowments it leads to lower financial development*. With respect to the civil law tradition, we formulate hypothesis *H2: The civil law has a constant (linear) effect on financial development, irrespective of the level of initial endowments*. The two previous hypotheses imply

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areas in Africa. Whenever the incentives faced by the local administrator are not appropriate, indirect rule can lead to poor institutional governance, with negative repercussions on postcolonial development.

differentiated responses to endowments among legal traditions. This can be formulated as an additional hypothesis *H3: There is heterogeneity in the interaction between legal traditions and endowments*. Finally, since the *law and finance theory* predicts higher financial development for common law countries and considering the above hypotheses, we expect the following hypothesis (*H4*) to be satisfied: *At low levels of endowments the common law leads to higher financial development than the civil law, but at sufficiently high levels of endowments the difference between the common law and the civil law vanishes.*

2.2.4 Differentiating colonies within the French civil law tradition

Within the group of former colonies belonging to the French civil law tradition there are countries of very diverse origin. We argue for the need to distinguish among at least three categories on the basis of the way the French law was obtained. The first category includes those colonies that directly received the French civil law by France itself. This group contains 24 former French colonies in our sample. The second category consists of the former Spanish colonies (18 countries), whereas a third group comprises the remaining colonies (18 countries).[11]

There are two distinctive characteristics that make Spanish American colonies deserve separate treatment: the enduring legacy of the Spanish law tradition and the particular reception of the French Civil Code by imitation.[12] Regarding the former, Spanish American colonies were ruled by Castilian kings over three centuries before they achieved independence. Over this broad interval, these territories experienced a long and continuous process of reception of the Spanish law, which is a legal tradition

[11] This third group entails those territories that were colonies of countries other than France and Spain. This is a heterogeneous group that comprises territories as diverse as the British mandates of the League of Nations for the Middle East, the Portuguese colonies or the Belgian, Dutch and Italian colonies. Bringing together colonies of such diverse origin into a residual group is not ideal, but it is the best available option given the small number of observations in each sub-category. In the empirical section we show that our results are robust to different classifications and even to the omission of this residual group.

[12] A third distinctive feature of these countries is their mixed influences, because legislators have increasingly incorporated other legal sources such as the American, German or Swiss law. This led to a decline of French legal influence throughout the twentieth century (e.g. Zweigert and Kötz 1998, Garro 1992, Mirow 2005).

with its own history and idiosyncratic features.[13] Initially after conquest, Spain transplanted Castilian laws to the colonies, but over time a special legislation was successively developed, which was compiled in the *Recopilación de las Indias*, a collection of 6,000 statutes published by Charles II in 1680 and applicable to all the American colonies (Gacto, Alejandre, and García 2003).[14] The influence of the Spanish law in the American colonies provided a background of *ius commune* that facilitated the reception of the French Civil Code and other European sources. Many traditional concepts and ideas of the Civil Code, especially those coming from Roman law, represented no breach with the legal institutions established in Latin America. The shared Roman roots of the Spanish and French legal traditions helped the reception of the Civil Code (Zweigert and Kötz 1998, Garro 1992, Mirrow 2004).

The second feature shared by former Spanish American colonies is the specific way of importation of the French civil law. Since these territories achieved their independence at the beginning of the nineteenth century, they were free to choose and build by themselves their legal systems. Thus, they received the French civil law by imitation, that is, through voluntary transplant, which increases the chances of receptivity by allowing the adaptation of foreign law to local conditions (Berkowitz, Pistor, and Richard 2003a). The civil codes of Chile and Argentina are good examples of adaptation to national circumstances, and many countries in the region took them as models (Mirrow 2001, Zweigert and Kötz 1998). In contrast, as noted by Merryman (1996), colonies receiving the French Civil Code directly by France itself did so more rigidly and did not receive the blueprints of how courts could interpret the law rather

[13] One must keep in mind the singularity and importance of the Spanish law tradition. Hamilton (1917) stated that the "Spanish Civil Law is the most influential body of law on the globe today [...] It is no copy of the Code Napoleon, although that was carefully consulted". Its singularity comes from the Spanish history and one can find on it "a Roman foundation, Gothic, Moslem, local and maritime elements" (p. 317). Commenting on the sources of the Spanish civil law, Brown (1956) places the Spanish law system in a middle point between the English doctrine of precedent and the French position.

[14] William W. Howe (1903) stressed the fundamental importance of the Spanish law for Central and South America, since all these countries have derived their system of law and jurisprudence from Spain. In fact, the study of the Castilian law *Las Siete Partidas* still maintains interest in this region. It was used, for example, together with the French Civil Code, in the drafting of the prestigious Chilean Civil Code (Mirow 2001).

than simply apply it –as held by the Napoleonic doctrine. This led to inefficient outcomes and expectedly hindered the development of the judicial system and in turn inhibited financial development in former French colonies (Beck, Demirgüç-Kunt, and Levine 2003b).

For all these reasons, there is no point in assimilating the reception of the French civil law in Spanish America to that in other regions such as West and Central Africa.[15] Therefore, we expect the Spanish civil law tradition to lead to higher financial development than when the civil law is implanted by France itself. Regarding the impact of endowments, we expect hypothesis *H2* to hold for both 'Spanish law legacy' and 'implantation by France' groups. This is because Spain, like France, implanted its legal system homogenously and in a centralized way across its empire, irrespective of precolonial endowments. This created similar conditions among its colonies for the reception of the French civil law, which must be reflected in a constant effect of the Spanish law legacy on financial development.[16] The above discussion leads us to formulate hypothesis *H5: There are differences in the effect of the Spanish civil law tradition on financial development relative to the case when the civil law is implanted by France itself, but no significant differences across both civil law groups in their response to endowments.*

[15] In addition, the substance of the law is also different because in one case legal systems are impregnated with the Spanish legal culture, while in the other with African and tribal customs. Further arguments justify the creation of the 'Spanish law legacy' category. The use of years since independence as a discriminating factor among civil law countries supports our classification, since 17 of the 19 colonies that became independent before 1850 were Spanish. Furthermore, although there is variability within Spanish American legal systems, differences with respect to the other French civil law groups are higher. Thus, we observe more homogeneity within the 'Spanish law legacy' group than in the whole group of civil law countries. For example, the Spanish law group presents a coefficient of variation for the indicator "creditor rights aggregate score" (from La Porta, Lopez-de-Silanes, and Shleifer 2008) of 0.80, lower than the value for the whole civil law group (1.02) and that for civil law countries not belonging to the Spanish law tradition (1.14). Regarding the ratio of private credit to GDP, the Spanish law group presents the highest level of homogeneity, as reflected in the lowest coefficient of variation 0.57 versus 0.76 for the whole civil law group and 0.85 for civil law countries not belonging to the Spanish law tradition.

[16] As far as hypotheses *H3* and *H4* are concerned, they are equally applicable to both French civil law groups.

Finally, with respect to the third group within the French legal tradition, i.e., the group 'others', we do not make specific predictions because this residual group comprises former colonies occupied by different colonial powers and we lack an appropriate theory for the way each of these powers transplanted the civil law to their colonial dominions. However, we can at least suggest that since they belong to the civil law tradition, they share features with the other civil law countries and, therefore, we expect a similar behavior.

2.3. EMPIRICAL METHODOLOGY AND DATA

2.3.1 Empirical strategy

The general approach to assessing the role played by legal traditions and endowments has been the estimation of additive models (Beck, Demirgüç-Kunt, and Levine 2003a, Levine 2005b). This type of model only allows for constant (linear) effects of legal origin on financial development, thus being unable to test the set of hypotheses formulated above. Towards that end, we need an interaction model that allows for the possibility of heterogeneity in the coefficient on endowments such that:

$$\begin{aligned} finance_i &= \alpha + \beta_1 \cdot civil\_law_i + \beta_2 \cdot common\_law^* endow_i \\ &+ \beta_3 \cdot civil\_law^* endow_i + \varepsilon_i \end{aligned} \tag{1}$$

where *finance* is the indicator of financial development, α is the constant term, *civil_law* is a dummy variable capturing whether the legal tradition is the French civil law (taking the British common law as the reference group, reflected in the constant term), *common_law*endow* and *civil_law*endow* represent the interaction terms between the two legal traditions and the endowments indicator, and ε_i is the error term.[17]

We test hypothesis *H1* through the coefficient on the interaction term *common_law*endow*. If β_2 is consistently negative and statistically significant, the proposition that the effect of the common law depends negatively on initial endowments will be accepted. Likewise, we test hypothesis *H2* through the coefficient on the interaction term *civil_law*endow*. If β_3 is neither consistently negative and significant

[17] Throughout the chapter, we use ordinary least squares and report heteroscedasticity-consistent standard errors.

nor consistently positive and significant, then we can accept *H2* and assume that the effect of the civil law on finance is invariant to initial endowments.

Regarding hypothesis *H3* that supports the heterogeneity in the interaction between legal traditions and endowments, it is tested by comparing the β_2 and β_3 coefficients. If both are significantly different, then *H3* is accepted. Hypothesis *H4* –concerning the relative effects on financial development of the common law vs. the civil law– can be tested by comparing the predicted values of financial development for both legal traditions at low and high levels of endowments.

Moreover, we argued above for the need to differentiate among three groups within the French civil law tradition on the basis of the way the civil law was received, namely, 'implantation by France', 'Spanish law legacy' and 'others'. This leads us to estimate a more complete model, which constitutes our reference specification:

$$\begin{aligned} finance_i = {} & \alpha + \beta_1 \cdot implantation\_France_i + \beta_2 \cdot Spanish\_law_i + \beta_3 \cdot Others_i + \\ & \beta_4 \cdot common\_law * endow_i + \beta_5 \cdot implantation\_France * endow_i + \\ & \beta_6 \cdot Spanish\_law * endow_i + \beta_7 \cdot Others * endow_i + \varepsilon_i \end{aligned} \qquad (2)$$

This model allows us to test hypothesis *H5* by statistically comparing the coefficients on the variables corresponding to the 'implantation by France' and the 'Spanish law legacy' categories. We expect statistically significant differences between the β_1 and β_2 coefficients, but no significant differences between the β_5 and β_6 coefficients, as given by the similar response across both civil law groups with respect to endowments. We will also be able to check whether β_1 is lower than β_2, as implied by the more adverse effect of the civil law tradition on financial development when it is implanted by France itself relative to Spanish colonies.

2.3.2 Data

The sample is restricted to overseas former colonies of Western powers, which excludes for example Japanese colonialism and colonies within the European continent. The restriction to former colonies is due to two reasons. First, legal traditions are arguably exogenous only for colonized territories since European powers transplanted their legal systems irrespective of the will and the endogenous development of indigenous societies. In this sense, colonialism is seen as a kind of natural experiment to assess the impact of legal traditions (Beck, Demirgüç-Kunt, and Levine 2003a). Second,

the *endowment theory* is applicable only to former colonies since what matters is the influence of initial conditions on the colonial strategies and policies implemented by colonizers. The resulting sample contains only countries within the British common law and French civil law traditions. There are a maximum of 100 ex-colonies for which data on our main indicators of financial development, legal traditions and endowments are available.

As a first concern, it is necessary to choose a proxy for financial development. Finance theory focuses on the role of financial institutions in channeling funds from savers to investors, gathering information and allocating capital to the highest-yield investment projects, exerting corporate control, pooling funds, managing risks and facilitating the exchange of goods and services, and how all these functions translate into a better allocation of resources and economic growth. Ideally, our measure of financial development should account for these functions provided by the financial system. However, there is little consensus on how to properly measure them. As noted by Rajan and Zingales (1998), what the extant literature has done so far is to use some imperfect proxies that may miss many of the key aspects to a modern financial system.

Among all the possible financial development proxies, our preferred measure is private credit by deposit money banks and other non-bank financial institutions over GDP, which we denote by *private credit*. Following Beck, Demirgüç-Kunt, and Levine (2003a) we also employ indicators of equity market development and private property rights protection. *Stock market capitalization* equals the total value of listed shares over GDP and is used because some economies rely more on financing directly through markets than via financial intermediaries. *Protection of property rights* is an indicator provided by the Heritage Foundation which measures the degree of protection of property rights by laws and the government, the possibility of expropriation, the independence of the judiciary and the enforcement of contracts. The *law and finance* and the *endowment* theories emphasize that legal traditions and endowments influence property rights and other elements of the legal environment, which are key to financial development.

Regarding the measure of endowments, our preferred choice is the logarithm of population density in 1500, which comes from Acemoglu, Johnson, and Robinson (2002) and represents the precolonial level of development, since only rich territories

could afford to be densely populated. The importance of precolonial population density as an initial endowment is based on the fact that it was a key factor that conditioned colonial strategies through various channels. On the one hand, a high level of indigenous population limited European settlements (Easterly and Levine 2012),[18] which is a central factor for the type of legal-administrative institutions established in the colonies. On the other hand, where Europeans found more prosperous and densely populated societies, they had incentives to build institutions to exploit indigenous resources.[19] Moreover, the presence of highly dense native populations implies the existence of a society with its own rules ("*Ubi Societas, Ibi Ius*"), which influenced the application of the common law to the colonies, as stressed by Zweigert and Kötz (1998) and Glendon, Carozza, and Picker (2008). Another advantage of indigenous population density over other alternatives is its availability for a larger cross-section of countries, which enables us to expand the sample in Beck, Demirgüç-Kunt, and Levine (2003a) by about 30 countries. In addition, population density constitutes a more comprehensive indicator of endowments, because it is also related to the disease environment, as "malaria and yellow fever [...] were endemic in many of the densely settled areas" (Acemoglu, Johnson and Robinson 2002, p. 1266). [20]

[18] Easterly and Levine (2012) find that population density in 1500 is a robust determinant of European settlers. In contrast, potential settler mortality does not influence European settlers once precolonial population density, indigenous mortality and latitude are controlled for. Likewise, Lange (2004) stresses the importance of this variable by arguing that "large local populations limited settlement by obstructing access to land and greatly increased the costs and risks of large-scale settlement" (p. 908).

[19] The Spaniards employed a system of coercive labor known as *encomienda* with the aim of exploiting the densely populated territories of the Aztec and Inca empires. Indeed, Acemoglu and Robinson (2012, Ch. 1) point out that the key factor for the different colonial strategies of Spain and England in the New World was the presence of native population that could be used as forced labor. Apart from Acemoglu and his coauthors, indigenous population density is often quoted and widely used in the literature as endowment indicator for explaining the colonial strategies and policies of European powers. See, among others, Fieldhouse (1966), Engerman and Sokoloff (2000), Mahoney (2003), Lange (2004), Lange, Mahoney, and vom Hau (2006) and Bruhn and Gallego (2012).

[20] Precolonial urbanization rate may be a better proxy for pre-existing wealth, but it implies a drastic reduction of the sample (for example, it does not include sub-Saharan Africa). Regarding potential settler mortality rate, there is controversy on the reliability of the data (Albouy 2012) and also entails a significant reduction in the sample. Moreover, after 1850 the widespread use of quinine meant that

Finally, the French civil law and the British common law are the dummy variables of legal traditions, which come from La Porta *et al.* (1999). We refer the reader to Appendix A for descriptions and sources of the rest of the variables. Appendix B contains the list of former colonies categorized by legal origin and the identity of the colonizer.

2.4. REGRESSION RESULTS

2.4.1 Main regression results

Table 2 reports the basic results with *private credit* as the dependent variable. As a starting point, we estimate a simple additive model in the first column. The signs of the variables are as expected, with endowments and the French civil law carrying highly significant negative coefficients. In line with Beck, Demirgüç-Kunt, and Levine (2003a), these preliminary results are consistent with the *endowment* and the *law and finance* theories.

tropical diseases declined in importance as an obstacle to European settlements (Olsson 2009), which implies that settler mortality as an endowment indicator may be less appropriate for the imperialist wave of colonization. Other variables such as geo-climatic conditions are rough indicators of endowments and do not reflect the level of precolonial development.

TABLE 2

MAIN REGRESSION RESULTS: PRIVATE CREDIT

	Additive model	Interaction model	Splitting civil law	Controlling additional factors						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Population density in 1500	-0.073***									
	(0.023)									
- Common law (Ref. group)										
- Civil law	-0.202***	-0.274***								
	(0.054)	(0.059)								
• Implantation by France			-0.420***	-0.231***	-0.470***	-0.427***	-0.351***	-0.335***	-0.330***	-0.271***
			(0.061)	(0.064)	(0.065)	(0.060)	(0.068)	(0.070)	(0.071)	(0.079)
• Spanish law legacy			-0.203***	-0.221***	-0.476***	-0.236***	-0.195***	-0.164**	-0.114	-0.260***
			(0.068)	(0.064)	(0.106)	(0.086)	(0.069)	(0.068)	(0.078)	(0.053)
• Others			-0.264***	-0.231***	-0.296***	-0.300***	-0.214***	-0.215***	-0.182**	-0.269***
			(0.069)	(0.058)	(0.065)	(0.066)	(0.068)	(0.068)	(0.080)	(0.059)
- Common law x Pop. dens.		-0.144***	-0.144***	-0.080***	-0.129***	-0.146***	-0.126***	-0.109***	-0.114***	-0.136***
		(0.030)	(0.031)	(0.025)	(0.030)	(0.030)	(0.030)	(0.029)	(0.031)	(0.024)
- Civil law x Pop. dens.		0.006								
		(0.019)								
• Implantation by France x Pop. dens.			0.071*	0.018	0.126***	0.046	0.042	0.025	0.062	0.019
			(0.038)	(0.041)	(0.046)	(0.039)	(0.037)	(0.040)	(0.037)	(0.063)
• Spanish law legacy x Pop. dens.			0.000	0.012	0.013	-0.002	0.013	0.049	0.015	0.008
			(0.029)	(0.035)	(0.031)	(0.032)	(0.030)	(0.038)	(0.032)	(0.029)
• Others x Pop. dens.			0.016	0.043*	0.004	0.007	0.011	0.008	0.013	0.040*
			(0.025)	(0.023)	(0.016)	(0.023)	(0.026)	(0.020)	(0.025)	(0.020)
Ln GDP pc				0.113***						
				(0.019)						
Years since independence					0.002***					
					(0.001)					
Religion (p-value)						[0.182]				
Ethnic fractionalization							-0.165			
							(0.100)			
Latitude								0.623**		
								(0.260)		
Land in tropics									-0.065	
									(0.058)	
Latin America and Caribbean										-0.060
										(0.070)
Africa										-0.288***
										(0.071)
Constant	0.479***	0.490***	0.490***	-0.487***	0.389***	0.303	0.552***	0.345***	0.440***	0.620***
	(0.057)	(0.055)	(0.056)	(0.159)	(0.071)	(0.187)	(0.071)	(0.082)	(0.080)	(0.070)
R^2	0.28	0.41	0.44	0.56	0.51	0.42	0.41	0.45	0.35	0.57
Number of observations	100	100	100	98	96	99	98	99	89	100
Wald tests										
H3: Differences in the interaction terms										
Common law x PD = Civil law x PD		0.00								
Common law x PD = Imp. by France x PD			0.00	0.05	0.00	0.00	0.00	0.01	0.00	0.02
Common law x PD = Spanish law leg. x PD			0.00	0.03	0.00	0.00	0.00	0.00	0.01	0.00
Common law x PD = Others x PD			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H4[a]: Differences in predicted values when pop. dens. is equal to 10 (log=2.3)										
Common law = Civil law		0.29								
Common law = Imp. by France			0.39	0.96	0.21	0.86	0.65	0.74	0.39	0.43
Common law = Spanish law leg.			0.21	0.94	0.31	0.47	0.23	0.09	0.10	0.46
Common law = Others			0.22	0.43	0.88	0.53	0.23	0.42	0.18	0.03
H5: Differences between Implantation by France and Spanish law legacy										
Spanish law leg. = Imp. by France			0.00	0.89	0.96	0.02	0.01	0.00	0.00	0.90
Spanish law leg. x PD = Imp. by France x PD			0.14	0.92	0.04	0.36	0.55	0.69	0.35	0.87

NOTES: Dependent variable is private credit by deposit money banks and other non-bank financial institutions over GDP. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote statistical significance at the 10, 5 and 1% level, respectively. In the bottom part of the table we show the p-values of the Wald tests of equality of coefficients. PD means population density.

[a] For low levels of endowments, this hypothesis is tested for a value of population density equal to 1 (log=0). In this case the statistical significance of the coefficient on the civil law dummy reflects whether the civil law group is statistically different from the reference group (the common law).

Yet this is not the whole story. The results of the interaction model estimated in column 2 are appealing and give support to hypotheses *H1* to *H4*. First, the interaction between the common law and population density is negative and statistically significant at the 1% level. This is consistent with *H1* that predicts that the effect of the common law on finance depends negatively on initial endowments. Second, the interaction between the civil law and population density is close to zero and highly insignificant, which clearly fits with *H2*, i.e., the civil law has a constant effect irrespective of the level of endowments. Third, the coefficients on the interaction terms are clearly different (-0.144 vs. 0.006 for the common law and the civil law, respectively),[21] which supports *H3* and indicates heterogeneity in the responses of the legal traditions to initial endowments. And fourth, we can show that *H4* is also satisfied. At relatively low values of population density, for example, for a value of 1 (i.e. natural logarithm equal to 0), the predicted value of *private credit* for common law countries is higher than that for civil law countries (0.49 vs. 0.22, respectively), being the difference statistically significant.[22] In contrast, for a level of population density of 10 (natural logarithm equal to 2.3), the predicted value of *private credit* for the British common law is lower than that for the French civil law (0.16 vs. 0.23),[23] though the difference is not statistically significant. Therefore, the evidence indicates that at high levels of endowments, French civil law countries at least equal the financial development level of common law countries.[24]

[21] The Wald test strongly rejects the equality of coefficients at the 1% significance level. The Wald tests for testing hypotheses *H3*, *H4* and *H5* are presented in the bottom part of the tables.

[22] The statistical significance of the coefficient on the civil law dummy reflects whether the civil law group is statistically different from the reference group (the common law) when the log of population density is equal to 0.

[23] The value for the common law is calculated as the constant –which measures the omitted group (i.e. the British common law)– plus the coefficient on the interaction between the common law and endowments times the log of population density. Likewise, the value for the civil law is calculated as 0.49-0.274+0.006**endow*.

[24] The relatively poorer performance of the common law at high levels of endowments can be related to the findings of Acemoglu and Johnson (2005), since they show that political institutions (instrumented by endowments –population density in 1500 and settler mortality–) are more critical to economic growth, investment, and financial development than contracting institutions (instrumented by legal origin). Hence,

Column 3 presents our reference model that divides the French civil law tradition into three groups. It is remarkable that hypotheses *H1* to *H4* are also largely satisfied in this case and hold for the three groups of French civil law tradition.[25] It remains to be shown whether hypothesis *H5* is fulfilled. The dummy 'implantation by France' presents a larger negative coefficient (-0.42) than the dummy 'Spanish law legacy' (-0.20), the difference being statistically significant at the 1% level. Since the coefficients on the interaction terms for both civil law categories are not significantly different (*p-value* of 0.14), we can assume the differences reflected in the dummy variables to be largely invariant to the level of endowments.[26] Both findings account for the fact that the Spanish civil law tradition leads to higher financial development than when the civil law is implanted by France itself. Regarding the category 'others', it presents similar patterns to the Spanish law legacy group, with a slightly larger negative coefficient on the dummy variable (-0.26) and an insignificant coefficient on the interaction term.

All other columns of Table 2 introduce additional factors that may affect financial development. We begin by including the logarithm of per capita GDP in column 4, which corrects for the possibility that cross-country differences in income could be driving financial development differences (La Porta, Lopez-de-Silanes, and Shleifer 2008), thereby controlling for the existence of fixed costs in credit markets. Column 5 adds 'years since independence' because a long post-colonial period allows countries to

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Acemoglu and Johnson's evidence suggests that endowments matter much more for financial development than having a common law tradition; and arguably, when large endowments are present the adverse effect on financial development dominates the positive effect from being a common law colony. Thus, it can be inferred that the common law by itself does not guarantee financial development.

[25] Note that the marginally significant positive coefficient on the interaction term 'implantation by France x Pop. dens.' does not imply the rejection of *H2,* since it becomes insignificant once we introduce additional control variables. Regarding *H4,* we also point out that for a level of population density of 10, the predicted value of private credit for the 'implantation by France', 'Spanish law legacy' and 'others' groups equal 0.233, 0.288 and 0.262, which are larger than the predicted value for the common law group (0.16), though again the differences between the predicted value of each civil law group and that of the common law group are not statistically significant.

[26] This holds throughout the analysis since the coefficients on the interaction terms for the civil law groups are generally positive but insignificant once additional control variables are incorporated into the specification.

develop institutions according to their needs and eliminate inefficiencies from their colonial past (Beck, Demirgüç-Kunt, and Levine 2003a). From the work of Max Weber (1976), religion is seen as a potential determinant of key capitalistic institutions. More recently, La Porta *et al.* (1999) use religion as a proxy for culture to explain the quality of institutions. To control for this factor, column 6 introduces the fractions of population professing the different confessions. Another factor susceptible to influencing finance is ethnolinguistic fractionalization, which is included in column 7. Beck, Demirgüç-Kunt, and Levine argue that greater fractionalization is related to policies and institutions intended to maintain the political and economic power instead of creating a competitive financial system. In the last three columns, we introduce latitude, the percentage of land in tropics and regional (continental) dummies. This will allow us to discard the possibility that the results are due simply to a correlation between financial development and colonies concentrated in areas with particular geographic features.

Table 2 offers a consistent pattern indicating the robustness of our baseline results. In general, we find significantly negative coefficients on the civil law dummies, and the dummy 'implantation by France' appears with a larger negative coefficient than the other civil law categories. In addition, the interaction term 'common law x pop. dens.' always exhibits a highly significant negative coefficient, whereas the coefficients on the interaction terms for the civil law groups are never negative and in most cases are insignificant and close to zero. Overall, these results appear in line with those obtained in the specification with no controls, which imply that the five hypotheses formulated in Section 2 are largely satisfied.[27] Regarding the control variables, per capita income, years since independence and latitude are positively correlated with *private credit*,

[27] The statistical difference between former French and Spanish colonies –as implied by *H5*– disappears when controlling for geographic regions, years since independence and per capita income. The fact that the Latin America and Caribbean dummy overlaps with former Spanish American colonies drives the difference between both civil law categories insignificant. Something similar occurs due to the high correlation between years since independence and Spanish law legacy, because all the Spanish American colonies included in our analysis achieved their independence early in the nineteenth century (between 1811 and 1825). Finally, the endogeneity of per capita income may spuriously reduce the coefficient on the independent variables, as argued in La Porta *et al*. (1999). This is what we observe for the coefficient on 'implantation by France' that almost halves and becomes close in size to that on the 'Spanish law legacy' group.

whereas the Africa dummy presents an expected negative sign. Finally, Tables 3 and 4 use *stock market capitalization* and *protection of property rights* as dependent variables. Remarkably, in both cases we find the same patterns in the estimated coefficients as in the specification for *private credit*, though the evidence supportive of hypotheses *H3* and *H5* is less clear-cut for the case of property rights protection when the civil law tradition is disaggregated into three groups.

TABLE 3

MAIN REGRESSION RESULTS: STOCK MARKET DEVELOPMENT

	Additive model	Interaction model	Splitting civil law	Controlling additional factors						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Population density in 1500	-0.088**									
	(0.034)									
- Common law (Ref. group)										
- Civil law	-0.269***	-0.341***								
	(0.084)	(0.097)								
• Implantation by France			-0.487***	-0.221**	-0.500***	-0.394***	-0.402***	-0.384***	-0.352***	-0.247***
			(0.093)	(0.087)	(0.088)	(0.084)	(0.092)	(0.114)	(0.088)	(0.091)
• Spanish law legacy			-0.324***	-0.331***	-0.422***	-0.024	-0.277***	-0.253**	-0.196**	-0.21*
			(0.104)	(0.084)	(0.133)	(0.132)	(0.088)	(0.099)	(0.097)	(0.107)
• Others			-0.208	-0.167*	-0.227*	-0.101	-0.141	-0.128	-0.081	-0.241**
			(0.128)	(0.088)	(0.133)	(0.109)	(0.118)	(0.125)	(0.118)	(0.102)
- Common law x Pop. dens.		-0.161***	-0.161***	-0.053*	-0.155**	-0.145***	-0.116***	-0.106**	-0.077***	-0.143***
		(0.051)	(0.052)	(0.029)	(0.060)	(0.038)	(0.034)	(0.043)	(0.026)	(0.047)
- Civil law x Pop. dens.		-0.001								
		(0.027)								
• Implantation by France x Pop. dens.			0.034**	-0.040	0.047**	-0.033	0.018	0.002	0.009	-0.064
			(0.015)	(0.032)	(0.023)	(0.045)	(0.027)	(0.040)	(0.024)	(0.055)
• Spanish law legacy x Pop. dens.			-0.022	-0.006	-0.018	0.002	-0.015	0.008	0.010	-0.019
			(0.042)	(0.041)	(0.042)	(0.059)	(0.043)	(0.053)	(0.045)	(0.043)
• Others x Pop. dens.			0.007	0.051	-0.026	-0.016	0.001	0.003	0.000	0.020
			(0.041)	(0.035)	(0.031)	(0.035)	(0.044)	(0.037)	(0.037)	(0.028)
Ln GDP pc				0.145***						
				(0.030)						
Years since independence					0.001					
					(0.001)					
Religion (p-value)						[0.018]				
Ethnic fractionalization							-0.098			
							(0.134)			
Latitude								0.391		
								(0.457)		
Land in tropics									-0.138	
									(0.091)	
Latin America and Caribbean										-0.388***
										(0.140)
Africa										-0.473***
										(0.118)
Constant	0.464***	0.473***	0.473***	-0.807***	0.435***	0.259	0.466***	0.335**	0.426***	0.751***
	(0.091)	(0.091)	(0.093)	(0.243)	(0.138)	(0.306)	(0.094)	(0.147)	(0.086)	(0.128)
R^2	0.22	0.30	0.33	0.48	0.34	0.37	0.30	0.31	0.28	0.48
Number of observations	92	92	92	90	88	91	91	91	85	92
Wald tests										
H3: Differences in the interaction terms										
Common law x PD = Civil law x PD		0.01								
Common law x PD = Imp. by France x PD			0.00	0.80	0.00	0.02	0.00	0.15	0.02	0.23
Common law x PD = Spanish law leg. x PD			0.04	0.35	0.05	0.05	0.06	0.03	0.09	0.05
Common law x PD = Others x PD			0.01	0.02	0.04	0.01	0.04	0.07	0.10	0.00
H4[a]: Differences in predicted values when pop. dens. is equal to 10 (log=2.3)										
Common law = Civil law		0.79								
Common law = Imp. by France			0.67	0.01	0.73	0.14	0.22	0.17	0.04	0.58
Common law = Spanish law leg.			0.97	0.06	0.65	0.10	0.72	0.95	0.98	0.62
Common law = Others			0.19	0.47	0.55	0.09	0.33	0.30	0.40	0.15
H5: Differences between Implantation by France and Spanish law legacy										
Spanish law leg. = Imp. by France			0.00	0.20	0.62	0.01	0.05	0.02	0.00	0.73
Spanish law leg. x PD = Imp. by France x PD			0.21	0.53	0.17	0.65	0.54	0.94	0.99	0.52

NOTES: Dependent variable is stock market capitalization, which represents the total value of listed shares over GDP. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote statistical significance at the 10, 5 and 1% level, respectively. In the bottom part of the table we show the p-values of the Wald tests of equality of coefficients. PD means population density.

[a] For low levels of endowments, this hypothesis is tested for a value of population density equal to 1 (log=0). In this case the statistical significance of the coefficient on the civil law dummy reflects whether the civil law group is statistically different from the reference group (the common law).

TABLE 4

MAIN REGRESSION RESULTS: PROTECTION OF PROPERTY RIGHTS

	Additive model	Interaction model	Splitting civil law	Controlling additional factors						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Population density in 1500	-5.057***									
	(1.279)									
- Common law (Ref. group)										
- Civil law	-15.097***	-17.197***								
	(3.954)	(4.240)								
• Implantation by France			-26.230***	-14.297**	-26.947***	-25.744***	-21.449***	-21.796***	-20.900***	-21.289***
			(5.723)	(5.792)	(6.203)	(5.376)	(7.068)	(6.209)	(5.523)	(7.404)
• Spanish law legacy			-15.679***	-17.535***	-21.664***	-12.548	-17.986***	-14.123***	-10.523**	-22.695***
			(5.256)	(4.382)	(6.981)	(8.659)	(5.036)	(5.228)	(5.224)	(7.790)
• Others			-12.865**	-12.733***	-14.063**	-12.108**	-11.319**	-11.111**	-10.866**	-14.053***
			(5.064)	(4.563)	(5.295)	(4.762)	(4.763)	(5.063)	(4.447)	(5.192)
- Common law x Pop. dens.		-7.449***	-7.449***	-4.172***	-7.022***	-7.321***	-7.004***	-6.155***	-6.097***	-7.387***
		(1.458)	(1.492)	(1.343)	(1.556)	(1.551)	(1.441)	(1.699)	(1.645)	(1.285)
- Civil law x Pop. dens.		-2.680								
		(1.712)								
• Implantation by France x Pop. dens.			1.564	-1.937	2.560	1.566	-1.723	-1.297	0.457	0.223
			(2.629)	(2.805)	(3.583)	(2.642)	(3.622)	(2.864)	(2.564)	(3.603)
• Spanish law legacy x Pop. dens.			-4.103	-3.297	-3.820	-4.136	-2.673	-1.088	-2.292	-3.667
			(4.933)	(4.960)	(5.037)	(5.007)	(4.965)	(4.896)	(4.890)	(4.998)
• Others x Pop. dens.			-2.989	-0.924	-3.685	-3.155	-3.668*	-3.390*	-2.538	-1.509
			(2.102)	(2.192)	(2.512)	(1.994)	(1.947)	(1.895)	(1.860)	(2.373)
Ln GDP pc				7.462***						
				(1.567)						
Years since independence					0.050					
					(0.052)					
Religion (p-value)						[0.867]				
Ethnic fractionalization							-19.055**			
							(9.345)			
Latitude								38.777**		
								(15.450)		
Land in tropics									-7.840*	
									(4.223)	
Latin America and Caribbean										4.394
										(7.425)
Africa										-9.252**
										(4.486)
Constant	54.142***	54.381***	54.381***	-9.780	51.864***	61.804***	64.691***	46.241***	53.901***	57.782***
	(3.487)	(3.422)	(3.503)	(13.448)	(4.897)	(19.172)	(6.601)	(5.070)	(4.094)	(3.413)
R^2	0.33	0.36	0.39	0.55	0.41	0.40	0.43	0.43	0.39	0.44
Number of observations	92	92	92	91	88	92	91	92	87	92
Wald tests										
H3: Differences in the interaction terms										
Common law x PD = Civil law x PD		0.04								
Common law x PD = Imp. by France x PD			0.00	0.50	0.02	0.00	0.20	0.18	0.03	0.05
Common law x PD = Spanish law leg. x PD			0.52	0.87	0.54	0.54	0.40	0.32	0.46	0.47
Common law x PD = Others x PD			0.09	0.15	0.24	0.10	0.18	0.28	0.15	0.03
H4[a]: Differences in predicted values when pop. dens. is equal to 10 (log=2.3)										
Common law = Civil law		0.24								
Common law = Imp. by France			0.32	0.05	0.45	0.35	0.11	0.07	0.29	0.50
Common law = Spanish law leg.			0.49	0.17	0.27	0.70	0.48	0.83	0.88	0.26
Common law = Others			0.70	0.35	0.37	0.72	0.57	0.46	0.66	0.93
H5: Differences between Implantation by France and Spanish law legacy										
Spanish law leg. = Imp. by France			0.08	0.62	0.58	0.17	0.65	0.18	0.08	0.89
Spanish law leg. x PD = Imp. by France x PD			0.31	0.81	0.31	0.32	0.88	0.97	0.62	0.53

NOTES: Dependent variable is protection of property rights, which reflects the level of protection of property rights and ranges from 0 to 100, where higher values mean stronger protection. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote statistical significance at the 10, 5 and 1% level, respectively. In the bottom part of the table we show the p-values of the Wald tests of equality of coefficients. PD means population density.

[a] For low levels of endowments, this hypothesis is tested for a value of population density equal to 1 (log=0). In this case the statistical significance of the coefficient on the civil law dummy reflects whether the civil law group is statistically different from the reference group (the common law).

2.4.2 Sensitivity Analyses

In the previous tables we have controlled for a number of alternative factors in order to ensure that our results are not affected by omitted variable bias. However, other problems may still persist. In this subsection we apply extensive tests to control for political structure variables, alternative indicators of endowments, sample selection and outliers. Table 5 reports the results from these robustness checks for *private credit*.

The political environment is often seen as a potential determinant of finance. Groups in power use their influence to shape policies and institutions to their own benefit (North 1990). Acemoglu, Johnson, and Robinson (2005) argue that economic institutions derive from political power, which is the combination of political institutions and "de facto" political power. Beck and Levine (2005) and La Porta, Lopez-de-Silanes, and Shleifer (2008) make reference to a number of studies that challenge the explanatory power of legal origins using political arguments. Our aim is to test whether our findings remain unchanged after controlling for differences in the political structure of countries, since centralized and powerful governments are more likely to be conditioned by the elite than competitive political systems (Beck, Demirgüç-Kunt, and Levine 2001b). Columns 1 to 3 introduce three political variables: 'legislative competition', 'checks' and 'executive constraints'. The first two are also employed by Beck, Demirgüç-Kunt, and Levine (2003a) with the same purpose. 'Legislative competition' captures the degree of competition of the last legislative election and 'checks' measures the number of influential veto players in legislative and executive initiatives. 'Executive constraints' measures the "checks and balances between the various parts of the decision-making process" (Marshall, Gurr, and Jaggers 2010, p. 24). In the three cases, the results remain robust and only the indicator 'checks' appears correlated with *private credit*.[28]

[28] Following Beck, Demirgüç-Kunt, and Levine (2003a), we also estimated these regressions through two-stage least squares, using as instruments for political structure the religion variables, years since independence and ethnolinguistic fractionalization. The political structure variables never appeared statistically significant whereas our previous results remained unchanged. Moreover, we regressed financial development indicators only on political structure variables, using as instruments our legal origins and endowments variables. Although political variables often exhibited significant coefficients, the overidentification tests were rejected, reflecting that our independent variables influence financial

TABLE 5
ADDITIONAL ROBUSTNESS CHECKS: PRIVATE CREDIT

	Political structure indicators			Alternative endowments indicators				Outliers			Sample selection			
	Legislative competition	Veto players	Executive constraints	Settler mortality	Urbaniza-tion rate	Sugar/ wheat ratio	Mineral resources	Leverage	Standard. residuals	Cook's D / Dfits	Drop neo-Europes	Drop Middle East & North Africa	Drop Latin Am. & Caribbean	Drop Africa
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
- Common law (Ref. group)														
- Civil law:														
• Implantation by France	-0.379***	-0.377***	-0.344***	-0.898**	-0.919***	-0.235***	-0.348***	-0.445***	-0.356***	-0.377***	-0.382***	-0.406***	-0.394***	-0.529***
	(0.064)	(0.065)	(0.074)	(0.367)	(0.212)	(0.078)	(0.073)	(0.063)	(0.053)	(0.055)	(0.073)	(0.060)	(0.078)	(0.072)
• Spanish law legacy	-0.177**	-0.169**	-0.153*	-1.835**	-0.705***	-0.049	-0.247***	-0.192**	-0.138**	-0.177***	-0.165**	-0.201***	-0.391***	-0.357***
	(0.071)	(0.070)	(0.080)	(0.868)	(0.208)	(0.086)	(0.077)	(0.076)	(0.061)	(0.065)	(0.079)	(0.070)	(0.073)	(0.068)
• Others	-0.205***	-0.207***	-0.170**	-0.644*	-0.682***	-0.005	-0.234***	-0.253***	-0.200***	-0.242***	-0.226***	-0.296***	-0.255***	-0.337***
	(0.070)	(0.069)	(0.082)	(0.355)	(0.196)	(0.123)	(0.080)	(0.076)	(0.062)	(0.064)	(0.079)	(0.070)	(0.092)	(0.072)
- Common law x endowments	-0.131***	-0.135***	-0.129***	-0.227***	-0.070**	-1.338*	-0.023**	-0.144***	-0.116***	-0.123***	-0.119***	-0.144***	-0.150***	-0.154***
	(0.030)	(0.030)	(0.030)	(0.044)	(0.026)	(0.714)	(0.009)	(0.031)	(0.025)	(0.024)	(0.043)	(0.031)	(0.033)	(0.030)
- Civil law x endowments:														
• Implantation by France x endowments	0.068*	0.086**	0.070	-0.076	0.016	0.106	0.002	0.109**	0.071*	0.041	0.071*	0.046	0.073*	0.004
	(0.039)	(0.040)	(0.042)	(0.050)	(0.009)	(0.252)	(0.008)	(0.045)	(0.038)	(0.025)	(0.038)	(0.031)	(0.039)	(0.019)
• Spanish law legacy x endowments	0.001	-0.010	0.003	0.148	0.000	-0.162	0.041***	-0.033	0.000	0.000	0.000	0.000	N. A.	0.008
	(0.030)	(0.030)	(0.029)	(0.192)	(0.009)	(0.156)	(0.013)	(0.085)	(0.030)	(0.030)	(0.030)	(0.030)	N. A.	(0.031)
• Others x endowments	0.015	0.020	0.013	-0.130**	0.000	-0.388	-0.012	-0.038*	0.016	-0.008	0.016	-0.021	0.026	0.051
	(0.025)	(0.026)	(0.029)	(0.054)	(0.006)	(0.704)	(0.008)	(0.020)	(0.026)	(0.020)	(0.026)	(0.015)	(0.033)	(0.037)
Legislative competition	0.019													
	(0.014)													
Number of veto players		0.021**												
		(0.009)												
Executive constraints			0.011											
			(0.016)											
Constant	0.332***	0.385***	0.372***	1.481***	1.007***	0.354***	0.499***	0.490***	0.425***	0.464***	0.452***	0.488***	0.459***	0.657***
	(0.100)	(0.065)	(0.096)	(0.220)	(0.193)	(0.076)	(0.066)	(0.056)	(0.047)	(0.052)	(0.068)	(0.058)	(0.073)	(0.055)
R^2	0.40	0.41	0.39	0.60	0.45	0.26	0.20	0.46	0.40	0.43	0.31	0.47	0.45	0.67
Number of observations	96	95	86	76	44	68	110	92	95	95	96	87	69	56
Wald tests														
H3: Differences in the interaction terms														
Common law x EN = Imp. by France x EN	0.00	0.00	0.00	0.03	0.00	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Common law x EN = Spanish law leg. x EN	0.00	0.00	0.00	0.06	0.02	0.11	0.00	0.22	0.00	0.00	0.03	0.00	N. A.	0.00
Common law x EN = Others x EN	0.00	0.00	0.00	0.17	0.01	0.35	0.38	0.01	0.00	0.00	0.01	0.00	0.00	0.00
H4: Differences in predicted values when endowments are high [a]														
Common law = Imp. by France	0.38	0.16	0.23	0.62	0.72	0.35	0.37	0.16	0.37	1.00	0.55	0.69	0.22	0.03
Common law = Spanish law leg.	0.22	0.25	0.16	0.18	0.96	0.19	0.00	0.73	0.20	0.29	0.31	0.21	N. A.	0.88
Common law = Others	0.13	0.09	0.09	0.69	0.92	0.30	0.22	0.91	0.20	0.74	0.35	0.88	0.11	0.27
H5: Differences between Implantation by France and Spanish law legacy														
Spanish law leg. = Imp. by France [b]	0.00	0.00	0.01	0.84	0.07	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.91	0.01
Spanish law leg. x EN =Imp.by France x EN	0.18	0.06	0.20	0.27	0.22	0.37	0.01	0.14	0.14	0.30	0.14	0.29	N. A.	0.92

NOTES: Dependent variable is private credit by deposit money banks and other non-bank financial institutions over GDP. The endowments indicator is population density in 1500, except in columns 4 to 7. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote statistical significance at the 10, 5 and 1% level, respectively. Outliers in column 8 are Argentina, Brazil, Egypt, Jordan, Lebanon, Suriname, Syrian and Uruguay. Outliers in column 9 are Botswana, Hong Kong, Malaysia, United States and South Africa. Outliers in column 10 are Botswana, Hong Kong, Jordan, Tunisia and United States. In the bottom part of the table we show the p-values of the Wald tests of equality of coefficients.

[a] The values for endowments indicators are: population density: 10 (log=2.3); settler mortality: 500 (log=6.2); urbanization rate: 10; sugar-weat ratio: 1.75/1.25 (log=0.34); mineral resources: 10.

[b] In column 4, the test is computed for a value of settler mortality equal to 60 (log=4.09), since there are no former Spanish or French colonies with values lower than this. EN means endowments.

development beyond the political structure of countries. All this holds for the other two indicators of financial development considered.

Another concern could be the particular indicator of endowments employed. Although we previously argued that population density in 1500 is the best possible indicator of endowments available, the next four columns incorporate alternative indicators. Potential mortality rate of European settlers (column 4) is an indicator introduced by Acemoglu, Johnson, and Robinson (2001) to account for the feasibility of settlements by Europeans. According to the *endowment theory* we expect a negative relation between potential settler mortality and financial development. Acemoglu, Johnson, and Robinson (2002) provide another indicator, the rate of precolonial urbanization, which is used as a proxy for precolonial wealth. Since precolonial prosperity gave the incentive to set up "extractive institutions" as a mechanism for extracting resources from colonial territories, we also expect a negative relationship between this variable and financial development (column 5).

Column 6 introduces the inverse of the "wheat/sugar ratio" that represents the suitability of land for sugarcane relative to wheat (Easterly 2007). Sugarcane was a widespread crop in plantation colonies, whereas wheat was not advantageous in large-scale cultivation. Column 7 employs an indicator of mineral resources endowments that calculates the average of mineral rents over GDP during the period 1960-2000. According to Engerman and Sokoloff (1997, 2000), the plantation system and the exploitation of mineral resources in the New World led to highly unequal societies that favored institutions built to benefit elites. For both indicators the *endowment theory* suggests that the larger the endowments the lower the level of financial development. The block of regressions devoted to alternative endowment indicators provides a picture totally consistent with our previous results. Endowments are negatively related to finance only for the common law tradition, but not for civil law countries.

The influence of outliers is another usual problem in econometric analysis. We consider several statistical methods to identify outliers such as leverage, standardized residuals, Cook's distance and DFITS.[29] Once outliers are detected, we exclude these countries and re-run the regressions. Columns 8 to 10 clearly show that our findings

[29] The cut-offs of the detection methods are the following: leverage, $2 \cdot k/n$; standardized residuals, $|2|$; Cook's distance, $4/n$; DFITS, $\left|2 \cdot \sqrt{k/n}\right|$; where k is the number of parameters and n is the number of observations. For outliers diagnostics and methods, see Belsley, Kuh, and Welsch (2004).

remain unaltered when outliers are excluded. In the remaining columns, we verify that the results are not driven by specific regions or particular groups of countries. Column 11 removes the colonies known as neo-Europes (USA, Canada, Australia and New Zealand), which are considered extreme cases of British colonialism, with initially low indigenous population density and currently highly developed financial systems. Column 12, 13 and 14 drop the regions Middle East and North Africa, Latin America and Africa, respectively. It is remarkable that our findings are highly robust to the presence of outliers as well as to the exclusion of several groups of countries.[30]

2.5. CONCLUSIONS

This chapter extends the *law and finance theory* by demonstrating heterogeneity in the interaction between legal traditions and endowments. We find that the effect of the common law on finance is conditioned by the level of endowments. Thus, for common law countries a negative relation between endowments and financial development is consistently observed. When one turns to civil law countries, the picture is quite different. We find that the impact of the civil law on finance does not depend on the level of endowments. This heterogeneity leads us to an interesting result in the relative

[30] Fairly similar results follow from these sensitivity analyses when the dependent variable is either *stock market capitalization* or *protection of property rights*, though for the latter the evidence supportive of hypotheses *H3* and *H5* is less clear-cut. For reasons of space, these results are not reported here but are available as unpublished appendices. For similar reasons, we do not report the results from the following robustness checks to alternative classifications of civil law countries. First, we disaggregated the residual group 'others' at the highest possible level, resulting in five new subcategories: British colonies (6 countries), Portuguese colonies (5), Belgian colonies (3), Dutch colonies (2) and others (one Italian and one US colonies). The results for the common law and for the categories 'implantation by France' and 'Spanish law legacy' remain unchanged. Regarding the other civil law subcategories, Portuguese colonies often report a negative and significant coefficient on the interaction term, which does not fit with what we observe for the other civil law groups. Second, to be sure that our findings are not driven by the residual group, we redo the analysis without the 18 countries belonging to that group. The results remain remarkably robust with this reduced sample. Third, we use years since independence rather than the colonizing country as a discriminating factor among civil law countries. We can distinguish two well-differentiated groups: those countries enjoying more than 150 years of independence and the rest. Using these two categories, we find the same pattern of heterogeneity in the interaction between legal traditions and endowments. Also, the civil law group of early independence (with 90 percent of former Spanish colonies) is associated with more financial development than that gaining independence later.

effect of legal traditions: at low levels of endowments the common law is associated with higher financial development, but as the level of endowments rises, the difference between the British and French legal traditions shrinks and becomes statistically insignificant. In that case, the prediction by the *law and finance theory* that the common law tradition leads always to higher financial development than the French civil law tradition does no longer hold. Also, it is interesting to note that the *endowment theory* only fits with the group of common law colonies.

The different patterns of implantation of European legal systems in colonial territories are key to understanding the results. According to Zweigert and Kötz (1998), Britain transplanted its legal system in a heterogeneous way across its empire. Some territories received the British common law extensively (e.g., settler colonies) and developed the legal requirements for well-functioning financial markets. In other territories with large endowments the implantation of the British law was very superficial and the system of colonial administration known as indirect rule prevailed. This led to the concentration of power in the hands of traditional chiefs and to ineffective legal systems, with negative consequences for the development of financial markets. In contrast, France pursued legal assimilation throughout the empire and its colonial legal policies were set accordingly (Zweigert and Kötz). The French empire was more centralized than the British, and colonial dominions were considered as an intrinsic part of the Republic (Fieldhouse 1966). These particularities led to a more rigid and uniform application of the law across the empire, which can largely account for the fact that the impact of the French civil law on finance does not depend on initial endowments.

We make another contribution to the law and finance literature by arguing strongly in favor of distinguishing former Spanish colonies from the other civil law countries. We do so for a couple of reasons: 1) they share the legacy of the Spanish law tradition, which facilitated the reception of the Civil Code, and 2) all the Spanish American colonies imported the Civil Code by a common procedure, namely, imitation. The evidence supports our argument since former Spanish colonies show a higher level of financial development than those territories where the civil law was implanted by France itself. The effect of the Spanish law legacy is also independent of the level of initial endowments, which can be explained because Spain also applied Castilian laws

uniformly across its American colonial possessions and all the American colonies adopted the Civil Code through voluntary transplant (Garro 1992, González 1992).

Although this chapter focuses on historical events, the consequences of the processes set in motion in the distant past continue to persist today. Those territories where European legal systems were not adapted to local circumstances or were hardly implanted deserve maximal attention from a policy perspective. Also, it is interesting to analyze the possible advantages of certain regions sharing the same legal influence. In this sense, the more rigid implementation of the civil law in French colonies, although negative in some aspects, can provide some advantages. For example, since 1993 sixteen countries in the francophone Sub-Saharan Africa adopted uniform commercial and financial legislation within the framework of the OHADA,[31] which is a useful policy tool to promote trade, financial integration and economic growth. These developments in regional integration and other topics related to legal traditions are fields of great interest for researchers.

[31] The French acronym for "Organisation pour l'Harmonisation du Droit des Affaires en Afrique" (www.ohada.com).

2.6. APPENDIX A

TABLE A1
DESCRIPTION OF VARIABLES

Variable	Description	Source
Number of veto players	Number of influential veto players in legislative and executive initiatives. A higher value means more veto players. The reference year is 2005.	Beck *et al.* (2001a), from Teorell *et al.* (2011).
Ethnic fractionalization	Probability that two randomly selected individuals from a given country do not belong to the same ethnolinguistic group.	Alesina *et al.* (2003), from Teorell *et al.* (2011).
Executive constraints	The extent of institutionalized constraints on the decision-making powers of chief executives. The scale ranges from 1 to 7, where a higher score means higher constraints. The reference year is 2005.	Polity IV (Marshall, Gurr, and Jaggers, 2010), from Teorell *et al.* (2011).
Land in geographical tropics (%)	Percentage of land in geographical tropics, from Center of International Development (Geographic datasets).	Gallup, Mellinger, and Sachs (2001).
Latitude	The absolute value of the latitude of the capital city divided by 90.	La Porta *et al.* (1999), from Teorell *et al.* (2011).
Legal origin	Legal origin variable: English Common Law and French Commercial Code. We complement this variable for three countries (Cambodia, Lao PDR and Vietnam) with information from La Porta, Lopez-de-Silanes, and Shleifer (2008).	La Porta *et al.* (1999), from Teorell *et al.* (2011).
Legislative competition	Degree of competition of the last legislative election. The scale ranges from 1 to 7, where a higher score means higher political competition. The reference year is 2005.	Beck *et al*. (2001a), from Teorell *et al* . (2011).
Mineral resources	Average of mineral rents over GDP during the period 1960-2000.	World Bank (2011).
Per capita GDP	GDP per capita, PPP (Constant International USD). Year 2005.	World Bank (2011), from Teorell *et al.* (2011)
Population density	Logarithm of population density in 1500 (total population divided by total arable land).	Acemoglu, Johnson, and Robinson (2002)
Private credit	Private credit by deposit money banks and other non-bank financial institutions over GDP. We take the average 1991-2005 to reflect a structural measure of financial development.	Beck, Demirgüç-Kunt, and Levine (2010) and (2003a).
Protection of property rights	This variable measures the degree of protection of property rights by laws and the government, the possibility of expropriation, the independence of the judiciary and the enforcement of contracts. The scale ranges from 0 to 100, where higher values mean stronger protection. The reference year is 2005.	Heritage Foundation (from Teorell *et al* ., 2011)
Religion	Protestants, Catholics, Muslims and others as a percentage of population in 1980.	La Porta *et al.* (1999), from Teorell *et al.* (2011).
Settler mortality	Logarithm of potential European settler mortality, measured in terms of deaths per annum per 1,000.	Acemoglu, Johnson, and Robinson (2002)
Stock market capitalization	Represents the total value of listed shares over GDP. We take the average 1991-2005 to reflect a structural measure of financial development.	Beck, Demirgüç-Kunt, and Levine (2010) and (2003a).
Sugar/Wheat ratio	The indicator is calculated as: log[(1 + share of arable land suitable for sugarcane)/(1 + share of arable land suitable for wheat)]. It is derived from the "Wheat/Sugar ratio" indicator of Easterly.	Easterly (2007).
Urbanization in 1500	Percent of population living in urban areas with at least 5,000 inhabitants, in 1500. Data for sub-Saharan Africa are not available.	Acemoglu, Johnson, and Robinson (2002)
Years since independence	2000 minus year of independence.	Olsson (2009).

2.7. APPENDIX B

TABLE B1
LIST OF FORMER COLONIES

British Common Law		St. Kitts and Nevis*	British	Eritrea	British
Antigua and Barbuda	British	St. Lucia*	British	Gabon*	French
Australia*	British	St. Vincent & the G.*	British	Guatemala*	Spanish
Bahamas, The*	British	Sudan*	British	Guinea*	French
Bahrain*	British	Swaziland*	British	Guinea-Bissau*	Portuguese
Bangladesh*	British	Tanzania*	British	Haiti*	French
Barbados*	British	Tonga	British	Honduras*	Spanish
Belize*	British	Trinidad and Tobago*	British	Indonesia*	Dutch
Bhutan	British	Tuvalu	British	Iraq	British
Botswana*	British	Uganda*	British	Jordan*	British
Brunei	British	United Arab Emirates	British	Kuwait*	British
Canada*	British	United States*	British	Lao PDR*	French
Cyprus	British	Vanuatu	British-French	Lebanon*	French
Dominica*	British	Zambia*	British	Libya*	Italian
Fiji	British	Zimbabwe*	British	Madagascar*	French
Gambia, The*	British			Mali*	French
Ghana*	British	**French Civil Law**		Mauritania*	French
Grenada*	British	Algeria*	French	Mauritius	British
Guyana*	British	Angola*	Portuguese	Mexico*	Spanish
Hong Kong*	British	Argentina*	Spanish	Morocco*	French
India*	British	Benin*	French	Mozambique*	Portuguese
Jamaica*	British	Bolivia*	Spanish	Nicaragua*	Spanish
Kenya*	British	Brazil*	Portuguese	Niger*	French
Kiribati	British	Burkina Faso*	French	Oman*	British
Lesotho*	British	Burundi*	Belgian	Panama*	Spanish
Malawi*	British	Cambodia*	French	Paraguay*	Spanish
Malaysia*	British	Cameroon*	French	Peru*	Spanish
Maldives	British	Cape Verde*	Portuguese	Philippines*	US
Marshall Islands	US	Central African R.*	French	Qatar*	British
Micronesia, Fed. Sts.	US	Chad*	French	Rwanda*	Belgian
Namibia*	British	Chile*	Spanish	Senegal*	French
Nauru	Australian	Colombia*	Spanish	Seychelles	British
New Zealand*	British	Comoros	French	Suriname*	Dutch
Nigeria*	British	Congo, Dem. Rep.*	Belgian	Syria*	French
Pakistan*	British	Congo, Rep.*	French	São Tomé and P.	Portuguese
Papua New Guinea*	Australian	Costa Rica*	Spanish	Togo*	French
Samoa	British	Côte d'Ivoire*	French	Tunisia*	French
Sierra Leone*	British	Djibouti	French	Uruguay*	Spanish
Singapore*	British	Dominican Republic*	Spanish	Venezuela, RB*	Spanish
Solomon Islands	British	Ecuador*	Spanish	Vietnam*	French
Somalia	Italian	Egypt, Arab Rep.*	British	Yemen, Rep.*	British
South Africa*	British	El Salvador*	Spanish		
Sri Lanka*	British	Equatorial Guinea*	Spanish		

NOTES: * indicates former colonies with no missing values for private credit and population density in 1500. Colonizing countries appear on the right.

2.8. UNPUBLISHED APPENDICES

INDEX:

UNPUBLISHED APPENDIX I. TABLE 1.
DESCRIPTIVE STATISTICS

Variable	Obs	Mean	Std. Dev.	Min	Max
Checks	109	2.73	1.91	1.00	17.00
Ethnic fractionalization	120	0.49	0.26	0.00	0.93
Executive constraints	95	4.61	1.93	1.00	7.00
Land in geographical tropics	97	0.46	0.43	0.00	1.00
Latitude	121	0.18	0.12	0.00	0.67
Legislative competition	110	6.10	1.63	1.00	7.00
Mineral resources	121	1.01	2.69	0.00	15.57
Per capita GDP	117	8.26	1.26	5.22	11.06
Population density	106	0.54	1.52	-3.83	4.61
Private credit	110	0.33	0.32	0.01	1.51
Protection of property rights	96	42.29	21.00	10.00	90.00
Religion- Catholics	121	33.04	34.66	0.00	96.60
Religion- Muslims	121	26.81	37.56	0.00	99.90
Religion- Others	119	25.75	25.35	0.00	98.00
Religion- Protestant	119	13.66	18.34	0.00	76.30
Settler mortality	77	4.72	1.20	2.15	7.99
Stock market development	97	0.26	0.44	0.00	2.68
Sugar/Wheat ratio	69	0.01	0.15	-0.58	0.39
Urbanization in 1500	45	6.52	4.86	0.00	17.79
Years since independence	118	61.97	57.63	3.00	224.00

UNPUBLISHED APPENDIX II. TABLE 1
ADDITIONAL ROBUSTNESS CHECKS: STOCK MARKET DEVELOPMENT

	Political structure indicators			Alternative endowments indicators				Outliers				Sample selection			
	Legislative competition	Veto players	Executive constraints	Settler mortality	Urbaniza-tion rate	Sugar/ wheat ratio	Mineral resources	Leverage	Standard. residuals	Cook's D	Dfits	Drop neo-Europes	Drop Middle East & North Africa	Drop Latin Am. & Caribbean	Drop Africa
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
- Common law (Ref. group)															
- Civil law:															
• Implantation by France	-0.423***	-0.419***	-0.462***	-1.42***	-1.128***	-0.33***	-0.407***	-0.492***	-0.323***	-0.398***	-0.359***	-0.511***	-0.465***	-0.519***	-0.658***
	(0.079)	(0.081)	(0.1)	(0.422)	(0.296)	(0.096)	(0.107)	(0.094)	(0.054)	(0.074)	(0.063)	(0.13)	(0.098)	(0.11)	(0.127)
• Spanish law legacy	-0.262***	-0.261***	-0.275***	-0.62	-0.835**	-0.179	-0.362***	-0.313**	-0.16**	-0.235***	-0.196**	-0.348**	-0.315***	-0.503***	-0.487***
	(0.095)	(0.092)	(0.097)	(0.765)	(0.324)	(0.111)	(0.11)	(0.118)	(0.071)	(0.088)	(0.079)	(0.138)	(0.109)	(0.11)	(0.136)
• Others	-0.14	-0.134	-0.104	-1.055**	-0.685**	-0.087	-0.12	-0.114	-0.044	-0.131	-0.092	-0.231	-0.336***	-0.189	-0.223
	(0.114)	(0.12)	(0.131)	(0.486)	(0.307)	(0.171)	(0.137)	(0.161)	(0.104)	(0.116)	(0.11)	(0.157)	(0.117)	(0.172)	(0.158)
- Common law x endowments	-0.119***	-0.121***	-0.12***	-0.251***	-0.07*	-0.533	-0.007	-0.161***	-0.083***	-0.095***	-0.094***	-0.182**	-0.16***	-0.171***	-0.172***
	(0.034)	(0.032)	(0.036)	(0.075)	(0.041)	(0.762)	(0.016)	(0.053)	(0.027)	(0.027)	(0.027)	(0.086)	(0.053)	(0.054)	(0.061)
- Civil law x endowments:															
• Implantation by France x endowments	0.034**	0.041**	0.036**	-0.026	0.012*	-0.195	-0.001	0.041**	0.034**	0.034**	0.034**	0.034**	0.01	0.035**	0.023
	(0.015)	(0.017)	(0.017)	(0.02)	(0.006)	(0.173)	(0.002)	(0.019)	(0.015)	(0.015)	(0.015)	(0.015)	(0.009)	(0.015)	(0.018)
• Spanish law legacy x endowments	-0.022	-0.027	-0.024	-0.183	-0.009	-0.382	0.092***	-0.057	-0.022	-0.022	-0.022	-0.022	-0.022	N. A.	-0.017
	(0.043)	(0.042)	(0.042)	(0.14)	(0.015)	(0.408)	(0.015)	(0.115)	(0.042)	(0.042)	(0.042)	(0.042)	(0.043)	N. A.	(0.044)
• Others x endowments	0.007	0.009	-0.015	-0.088*	-0.009	-0.046	-0.031***	-0.12**	0.007	-0.029	-0.029	0.007	-0.025	-0.014	0.096***
	(0.041)	(0.042)	(0.044)	(0.051)	(0.007)	(1.293)	(0.012)	(0.048)	(0.041)	(0.029)	(0.029)	(0.041)	(0.02)	(0.06)	(0.033)
Legislative competition	0.003														
	(0.022)														
Number of veto players		0.01													
		(0.013)													
Executive constraints			-0.008												
			(0.024)												
Constant	0.392**	0.375***	0.469***	1.588***	1.051***	0.349***	0.433***	0.473***	0.308***	0.383***	0.345***	0.496***	0.463***	0.503***	0.643***
	(0.149)	(0.097)	(0.157)	(0.404)	(0.291)	(0.095)	(0.106)	(0.093)	(0.053)	(0.073)	(0.063)	(0.129)	(0.098)	(0.11)	(0.126)
R-squared	0.29	0.29	0.32	0.45	0.36	0.18	0.17	0.34	0.28	0.26	0.29	0.29	0.35	0.37	0.43
Number of observations	90	89	82	74	42	66	97	84	88	89	88	88	80	64	51
Wald tests															
H3: Differences in the interaction terms															
Common law x EN = Imp. by France x EN	0.00	0.00	0.00	0.00	0.05	0.67	0.69	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
Common law x EN = Spanish law leg. x EN	0.08	0.09	0.08	0.67	0.17	0.86	0.00	0.41	0.23	0.15	0.16	0.10	0.05	N. A.	0.05
Common law x EN = Others x EN	0.02	0.02	0.07	0.07	0.15	0.75	0.22	0.57	0.07	0.10	0.10	0.05	0.02	0.06	0.00
H4: Differences in predicted values when endowments are high †															
Common law = Imp. by France	0.36	0.55	0.20	0.83	0.27	0.47	0.00	0.77	0.40	0.16	0.31	0.92	0.40	0.62	0.07
Common law = Spanish law leg.	0.75	0.71	0.66	0.42	0.43	0.67	0.00	0.74	0.86	0.56	0.78	0.89	0.98	N. A.	0.38
Common law = Others	0.25	0.19	0.30	0.73	0.79	0.87	0.01	0.83	0.18	0.84	0.52	0.18	0.82	0.23	0.01
H5: Differences between Implantation by France and Spanish law legacy															
Spanish law leg. = Imp. by France ††	0.00	0.00	0.02	0.099	0.06	0.01	0.18	0.02	0.00	0.00	0.00	0.00	0.00	0.11	0.00
Spanish law leg. x EN =Imp.by France x EN	0.22	0.15	0.20	0.27	0.198	0.67	0.00	0.40	0.21	0.21	0.21	0.21	0.47	N. A.	0.40

NOTES: Dependent variable is stock market capitalization, which represents the total value of listed shares over GDP. The endowments indicator is population density in 1500, except in columns 4 to 7. Variable descriptions are provided in Appendix I. The sample contains non-European countries colonized by Western powers (Appendix II). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. Outliers in column 8 are Argentina, Brazil, Egypt, Jordan, Lebanon, Suriname, Syrian and Uruguay. Outliers in column 9 are Hong Kong, Malaysia, Singapore and South Africa. Outliers in column 10 are Hong Kong, Jordan and Singapore. Outliers in column 11 are Hong Kong, Jordan, Malaysia and Singapore. In the bottom part of the table we show the p-values of the Wald tests of equality of coefficients. † The values for endowments indicators are: population density: 10 (log=2.3); settler mortality: 500 (log=6.2); urbanization rate: 10; sugar-weat ratio: 1.75/1.25 (log=0.34); mineral resources: 10. †† In column 4, the test is computed for a value of settler mortality equal to 60 (log=4.09), since there are no former Spanish or French colonies with values lower than this. EN means endowments.

UNPUBLISHED APPENDIX II. TABLE 2
ADDITIONAL ROBUSTNESS CHECKS: PROTECTION OF PROPERTY RIGHTS

	Political structure indicators			Alternative endowments indicators				Outliers				Sample selection			
	Legislative competition	Veto players	Executive constraints	Settler mortality	Urbaniza-tion rate	Sugar/ wheat ratio	Mineral resources	Leverage	Standard. residuals	Cook's D	Dfits	Drop neo-Europes	Drop Middle East & North Africa	Drop Latin Am. & Caribbean	Drop Africa
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
- Common law (Ref. group)															
- Civil law:															
• Implantation by France	-26.005***	-25.06***	-18.092***	-69.401***	-81.582***	-16.147***	-26.077***	-25.938***	-27.814***	-27.584***	-27.584***	-22.927***	-24.759***	-21.09***	-60.774***
	(5.718)	(6.12)	(5.934)	(17.931)	(10.642)	(5.08)	(5.389)	(5.86)	(5.149)	(5.636)	(5.636)	(6.117)	(6.175)	(5.674)	(4.334)
• Spanish law legacy	-16.231***	-15.774***	-15.197***	19.86	-37.113**	-5.701	-22.009***	-16.35**	-20.203***	-23.348***	-23.348***	-12.376**	-15.315***	-21.265***	-26.687***
	(5.365)	(5.251)	(4.796)	(44.78)	(14.265)	(5.826)	(5.896)	(6.612)	(3.642)	(3.672)	(3.672)	(5.681)	(5.428)	(3.549)	(5.627)
• Others	-11.995**	-11.127**	-12.187**	19.729	-48.332***	-6.633	-16.728**	-10.192*	-14.448***	-16.631***	-16.631***	-9.562*	-14.502**	-10.921	-21.727***
	(5.2)	(5.205)	(5.712)	(20.948)	(13.921)	(6.431)	(6.472)	(6.018)	(4.399)	(4.13)	(4.13)	(5.503)	(5.7)	(6.953)	(4.602)
- Common law x endowments	-7.481***	-7.969***	-7.137***	-9.216***	-4.573***	-61.469*	-1.467*	-7.132***	-8.178***	-8.262***	-8.262***	-5.015**	-7.438***	-8.092***	-7.55***
	(1.474)	(1.256)	(1.56)	(2.444)	(1.19)	(34.831)	(0.847)	(1.768)	(1.144)	(1.238)	(1.238)	(2.184)	(1.517)	(1.656)	(1.084)
- Civil law x endowments:															
• Implantation by France x endowments	1.411	2.592	0.03	0.922	2.128***	32.889	0.056	1.564	1.564	1.564	1.564	1.564	-0.362	0.568	8.796***
	(2.656)	(2.905)	(2.79)	(2.033)	(0.64)	(47.24)	(0.281)	(2.64)	(2.638)	(2.64)	(2.64)	(2.635)	(3.891)	(2.586)	(0.962)
• Spanish law legacy x endowments	-4.072	-5.046	-3.579	-16.921*	-1.019	-53.073***	5.768***	-1.062	-3.436	6.324*	6.324*	-4.103	-4.103	N. A.	-3.861
	(4.961)	(4.922)	(4.76)	(8.809)	(1.198)	(19.042)	(1.913)	(8.504)	(5.125)	(3.327)	(3.327)	(4.944)	(4.976)	N. A.	(5.159)
• Others x endowments	-2.963	-2.551	-1.212	-15.919***	-0.142	-1.361	0.885*	-8.616***	-2.989	-6.123***	-6.123***	-2.989	-5.74***	-2.469	-1.922
	(2.036)	(2.086)	(2.217)	(3.486)	(1.562)	(45.379)	(0.507)	(3.157)	(2.109)	(1.548)	(1.548)	(2.107)	(1.867)	(3.058)	(2.151)
Legislative competition	0.948														
	(1.027)														
Number of veto players		1.867***													
		(0.596)													
Executive constraints			2.02*												
			(1.139)												
Constant	48.354***	48.209***	41.801***	94.356***	83.284***	46.714***	56.022***	54.09***	55.965***	55.735***	55.735***	51.078***	54.018***	51.265***	65.821***
	(6.945)	(4.408)	(7.074)	(12.772)	(8.809)	(4.452)	(4.703)	(3.7)	(2.428)	(3.335)	(3.335)	(4.105)	(3.72)	(3.549)	(3.671)
R-squared	0.39	0.42	0.43	0.43	0.58	0.3	0.27	0.4	0.56	0.54	0.54	0.24	0.42	0.46	0.65
Number of observations	92	91	85	73	42	66	96	85	86	85	85	88	78	66	50
Wald tests															
H3: Differences in the interaction terms															
Common law x EN = Imp. by France x EN	0.00	0.00	0.03	0.00	0.00	0.11	0.09	0.01	0.00	0.00	0.00	0.06	0.09	0.01	0.00
Common law x EN = Spanish law leg. x EN	0.51	0.57	0.48	0.40	0.04	0.83	0.00	0.49	0.37	0.00	0.00	0.87	0.52	N. A.	0.49
Common law x EN = Others x EN	0.08	0.03	0.03	0.12	0.03	0.30	0.02	0.68	0.03	0.28	0.28	0.51	0.48	0.11	0.02
H4: Differences in predicted values when endowments are high †															
Common law = Imp. by France	0.31	0.89	0.77	0.26	0.04	0.47	0.12	0.29	0.26	0.37	0.37	0.17	0.25	0.84	0.00
Common law = Spanish law leg.	0.47	0.42	0.53	0.03	0.82	0.83	0.01	0.88	0.42	0.28	0.28	0.38	0.52	N. A.	0.14
Common law = Others	0.81	0.84	0.82	0.01	0.73	0.46	0.34	0.05	0.69	0.06	0.06	0.48	0.12	0.77	0.28
H5: Differences between Implantation by France and Spanish law legacy															
Spanish law leg. = Imp. by France ††	0.11	0.16	0.64	0.06	0.00	0.02	0.36	0.18	0.15	0.38	0.38	0.08	0.14	0.97	0.00
Spanish law leg. x EN =Imp.by France x EN	0.33	0.18	0.52	0.05	0.03	0.10	0.00	0.77	0.39	0.27	0.27	0.31	0.56	N. A.	0.02

NOTES: Dependent variable is protection of property rights, which reflects the level of protection of property rights and ranges from 0 to 100, where higher values mean stronger protection. The endowments indicator is population density in 1500, except in columns 4 to 7. Variable descriptions are provided in Appendix I. The sample contains non-European countries colonized by Western powers (Appendix II). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. Outliers in column 8 are Argentina, Brazil, Canada, Egypt, Jordan, Suriname and Uruguay. Outliers in column 9 are The Bahamas, Barbados, Chiles, Namibia, Sierra Leone and Zimbabwe. Outliers in column 10 are Argentina, Chile, Cape Verde, Egypt, Jordan, Namibia and Uruguay. Outliers in column 11 are the same as in column 10. In the bottom part of the table we show the p-values of the Wald tests of equality of coefficients. † The values for endowments indicators are: population density: 10 (log=2.3); settler mortality: 500 (log=6.2); urbanization rate: 10; sugar-weat ratio: 1.75/1.25 (log=0.34); mineral resources: 10. †† In column 4, the test is computed for a value of settler mortality equal to 60 (log=4.09), since there are no former Spanish or French colonies with values lower than this. EN means endowments.

UNPUBLISHED APPENDIX III. TABLE 1

HIGHER DISAGGREGATION OF THE CIVIL LAW: PRIVATE CREDIT

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
- Common law (Ref. group)								
- Civil law:								
• Implantation by France	-0.42***	-0.204***	-0.469***	-0.422***	-0.361***	-0.338***	-0.336***	-0.269***
	(0.064)	(0.074)	(0.068)	(0.062)	(0.073)	(0.075)	(0.074)	(0.087)
• Spanish law legacy	-0.203***	-0.228***	-0.474***	-0.234**	-0.193***	-0.165**	-0.119	-0.25***
	(0.072)	(0.067)	(0.124)	(0.1)	(0.072)	(0.072)	(0.081)	(0.056)
• Portuguese colonies	-0.347***	-0.192**	-0.355***	-0.365***	-0.305***	-0.299***	-0.274***	-0.223***
	(0.063)	(0.076)	(0.071)	(0.065)	(0.066)	(0.066)	(0.074)	(0.068)
• British colonies	-0.184*	-0.383***	-0.17	-0.256**	-0.082	-0.2**	-0.121	-0.343***
	(0.098)	(0.096)	(0.11)	(0.119)	(0.079)	(0.087)	(0.119)	(0.124)
• Belgian colonies	-0.5***	-0.087	-0.488***	-0.464***	-0.42***	-0.36***	-0.407***	-0.342***
	(0.059)	(0.081)	(0.057)	(0.061)	(0.083)	(0.093)	(0.071)	(0.067)
• Dutch colonies	-0.225***	-0.19***	-0.213***	-0.218***	-0.174**	-0.116	-0.13*	-0.326***
	(0.058)	(0.045)	(0.057)	(0.06)	(0.067)	(0.08)	(0.071)	(0.05)
• Others (Italian and US)	-0.068	0.068	-0.217***	-0.087	-0.1	0.004	0.037	-0.28***
	(0.058)	(0.045)	(0.075)	(0.093)	(0.07)	(0.068)	(0.079)	(0.1)
- Common law x Pop. dens.	-0.144***	-0.072***	-0.129***	-0.143***	-0.127***	-0.11***	-0.118***	-0.136***
	(0.032)	(0.026)	(0.032)	(0.032)	(0.032)	(0.03)	(0.032)	(0.025)
- Civil law x Pop. dens.:								
• Implantation by France x Pop. dens.	0.071*	0.01	0.126**	0.052	0.048	0.027	0.066*	0.017
	(0.039)	(0.046)	(0.048)	(0.042)	(0.039)	(0.043)	(0.039)	(0.068)
• Spanish law legacy x Pop. dens.	0	0.014	0.013	-0.001	0.01	0.046	0.008	0.007
	(0.031)	(0.038)	(0.033)	(0.034)	(0.032)	(0.041)	(0.034)	(0.031)
• Portuguese colonies x Pop. dens.	-0.095***	0.002	-0.004	-0.091***	-0.082***	-0.099***	-0.089***	-0.035
	(0.012)	(0.032)	(0.054)	(0.027)	(0.015)	(0.015)	(0.014)	(0.03)
• British colonies x Pop. dens.	0.04	0.105**	-0.015	0.042	0.03	0.034	0.04	0.082***
	(0.034)	(0.042)	(0.027)	(0.034)	(0.038)	(0.031)	(0.034)	(0.025)
• Belgian colonies x Pop. dens.	0.047***	0.016	0.049***	0.031	0.021	0.041***	0.047***	0.047***
	(0.014)	(0.03)	(0.014)	(0.023)	(0.027)	(0.013)	(0.015)	(0.014)
• Dutch colonies x Pop. dens.	0.063***	0.091***	0.042***	0.043	0.064***	0.061***	0.062***	0.037
	(0)	(0.006)	(0.01)	(0.03)	(0)	(0.001)	(0.003)	(0.029)
• Others (Italian and US) x Pop. dens.	-0.096***	-0.191***	-0.043*	-0.116***	-0.062**	-0.133***	-0.112***	0.043
	(0)	(0.019)	(0.024)	(0.044)	(0.03)	(0.02)	(0.034)	(0.044)
Ln GDP pc		0.131***						
		(0.027)						
Years since independence			0.002**					
			(0.001)					
Religion (p-value)				[0.5711]				
Ethnic fractionalization					-0.132			
					(0.115)			
Latitude						0.592*		
						(0.316)		
Land in tropics							-0.033	
							(0.074)	
Latin America and Caribbean								-0.08
								(0.088)
Africa								-0.299***
								(0.093)
Constant	0.49***	-0.64***	0.39***	0.32	0.535***	0.351***	0.426***	0.63***
	(0.058)	(0.216)	(0.079)	(0.211)	(0.078)	(0.092)	(0.087)	(0.083)
R-squared	0.47	0.59	0.53	0.45	0.46	0.48	0.39	0.58
Number of observations	100	98	96	99	98	99	89	100
Wald tests								
H3: Differences in the interaction terms								
Common law x PD = Imp. by France x PD	0.00	0.13	0.00	0.00	0.00	0.02	0.00	0.04
Common law x PD = Spanish law leg. x PD	0.00	0.05	0.00	0.00	0.00	0.00	0.01	0.00
Common law x PD = Portuguese col. x PD	0.16	0.06	0.02	0.15	0.20	0.74	0.42	0.01
Common law x PD = British col. x PD	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Common law x PD = Belgian col. x PD	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Common law x PD = Duch col. x PD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Common law x PD = Others x PD	0.14	0.00	0.01	0.55	0.12	0.57	0.90	0.00
H4: Differences in predicted values when pop. dens. is equal to 10 (log=2.3)								
Common law = Imp. by France	0.41	0.85	0.23	0.79	0.62	0.80	0.35	0.48
Common law = Spanish law leg.	0.23	0.81	0.37	0.55	0.25	0.11	0.14	0.43
Common law = Portuguese col.	0.00	0.87	0.54	0.00	0.01	0.00	0.01	0.92
Common law = British col.	0.03	0.80	0.34	0.15	0.01	0.19	0.05	0.09
Common law = Belgian col.	0.37	0.15	0.22	0.40	0.19	0.87	0.69	0.20
Common law = Duch col.	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.44
Common law = Others	0.48	0.00	0.77	0.70	0.41	0.39	0.48	0.01
H5: Differences between Implantation by France and Spanish law legacy								
Spanish law leg. = Imp. by France	0.00	0.77	0.97	0.05	0.01	0.00	0.00	0.84
Spanish law leg. x PD = Imp. by France x PD	0.16	0.94	0.06	0.35	0.47	0.77	0.27	0.90

NOTES: Dependent variable is private credit by deposit money banks and other non-bank financial institutions over GDP. Variable descriptions are provided in Appendix I. The sample contains non-European countries colonized by Western powers (Appendix II). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. At the bottom we show the p-values of the Wald tests of equality of coefficients. PD means population density.

UNPUBLISHED APPENDIX III. TABLE 2

HIGHER DISAGGREGATION OF THE CIVIL LAW: STOCK MARKET DEVELOPMENT

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
- Common law (Ref. group)								
- Civil law:								
• Implantation by France	-0.487***	-0.229**	-0.499***	-0.377***	-0.413***	-0.421***	-0.371***	-0.252**
	(0.097)	(0.095)	(0.091)	(0.081)	(0.098)	(0.122)	(0.091)	(0.1)
• Spanish law legacy	-0.324***	-0.329***	-0.415**	0.02	-0.273***	-0.264**	-0.21**	-0.201*
	(0.109)	(0.09)	(0.164)	(0.14)	(0.092)	(0.106)	(0.104)	(0.117)
• Portuguese colonies	-0.436***	-0.264**	-0.435***	-0.241**	-0.367***	-0.375***	-0.322***	-0.257***
	(0.097)	(0.105)	(0.1)	(0.11)	(0.091)	(0.094)	(0.088)	(0.087)
• British colonies	0.125	-0.115	0.296**	0.107	0.189	0.176	0.206	-0.166
	(0.189)	(0.18)	(0.114)	(0.212)	(0.19)	(0.179)	(0.188)	(0.225)
• Belgian colonies	-0.473***	-0.007	-0.468***	-0.281***	-0.389***	-0.398**	-0.342***	-0.285***
	(0.097)	(0.12)	(0.105)	(0.073)	(0.112)	(0.163)	(0.102)	(0.094)
• Dutch colonies	-0.361***	-0.3***	-0.356***	-0.308***	-0.29***	-0.291**	-0.227**	-0.446***
	(0.097)	(0.07)	(0.105)	(0.078)	(0.092)	(0.138)	(0.106)	(0.099)
• Others (Italian and US)	0.032	0.148**	-0.009	0.35***	0.072	0.094	0.168	-0.245
	(0.097)	(0.068)	(0.083)	(0.112)	(0.083)	(0.099)	(0.11)	(0.149)
- Common law x Pop. dens.	-0.161***	-0.055*	-0.156**	-0.136***	-0.117***	-0.116**	-0.087***	-0.143***
	(0.055)	(0.032)	(0.065)	(0.041)	(0.036)	(0.045)	(0.028)	(0.048)
- Civil law x Pop. dens.:								
• Implantation by France x Pop. dens.	0.034**	-0.038	0.047*	-0.021	0.024	0.028	0.024	-0.063
	(0.015)	(0.036)	(0.025)	(0.048)	(0.029)	(0.045)	(0.024)	(0.059)
• Spanish law legacy x Pop. dens.	-0.022	-0.007	-0.018	0.005	-0.018	-0.016	-0.009	-0.02
	(0.044)	(0.043)	(0.045)	(0.064)	(0.045)	(0.058)	(0.048)	(0.045)
• Portuguese colonies x Pop. dens.	-0.112***	-0.021	-0.067	-0.174***	-0.107***	-0.114***	-0.119***	-0.085*
	(0.003)	(0.046)	(0.1)	(0.049)	(0.013)	(0.012)	(0.013)	(0.049)
• British colonies x Pop. dens.	-0.022	0.05	-0.119***	-0.025	-0.025	-0.023	-0.022	0.043
	(0.064)	(0.068)	(0.016)	(0.067)	(0.068)	(0.064)	(0.065)	(0.047)
• Belgian colonies x Pop. dens.	0	-0.033*	0.001	0.016	-0.012	-0.001	0	0
	(0)	(0.019)	(0.001)	(0.033)	(0.029)	(0.006)	(0.002)	(0)
• Dutch colonies x Pop. dens.	0.072***	0.102***	0.065***	-0.001	0.072***	0.072***	0.07***	-0.06
	(0)	(0.009)	(0.016)	(0.055)	(0)	(0.002)	(0.004)	(0.059)
• Others (Italian and US) x Pop. dens.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
Ln GDP pc		0.14***						
		(0.041)						
Years since independence			0.001					
			(0.002)					
Religion (p-value)				[0.1158]				
Ethnic fractionalization					-0.06			
					(0.146)			
Latitude						0.082		
						(0.525)		
Land in tropics							-0.056	
							(0.107)	
Latin America and Caribbean								-0.396**
								(0.176)
Africa								-0.465***
								(0.151)
Constant	0.473***	-0.761**	0.438***	0.341	0.446***	0.398**	0.392***	0.749***
	(0.097)	(0.331)	(0.156)	(0.333)	(0.1)	(0.161)	(0.091)	(0.149)
R-squared	0.38	0.5	0.39	0.42	0.37	0.37	0.35	0.5
Number of observations	92	90	88	91	91	91	85	92
Wald tests								
H3: Differences in the interaction terms								
Common law x PD = Imp. by France x PD	0.00	0.75	0.00	0.01	0.00	0.08	0.01	0.25
Common law x PD = Spanish law leg. x PD	0.05	0.36	0.06	0.08	0.08	0.07	0.16	0.06
Common law x PD = Portuguese col. x PD	0.38	0.48	0.14	0.53	0.79	0.98	0.33	0.33
Common law x PD = British col. x PD	0.10	0.14	0.64	0.15	0.24	0.24	0.36	0.01
Common law x PD = Belgian col. x PD	0.00	0.60	0.02	0.00	0.04	0.02	0.00	0.00
Common law x PD = Duch col. x PD	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.16
Common law x PD = Others x PD	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
H4: Differences in predicted values when pop. dens. is equal to 10 (log=2.3)								
Common law = Imp. by France	0.68	0.02	0.75	0.27	0.27	0.40	0.14	0.58
Common law = Spanish law leg.	0.97	0.09	0.72	0.11	0.72	0.82	0.82	0.61
Common law = Portuguese col.	0.00	0.30	0.22	0.08	0.00	0.00	0.00	0.42
Common law = British col.	0.01	0.49	0.00	0.04	0.02	0.03	0.03	0.03
Common law = Belgian col.	0.25	0.59	0.25	0.49	0.05	0.17	0.08	0.65
Common law = Duch col.	0.05	0.36	0.21	0.98	0.07	0.10	0.10	0.10
Common law = Others	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
H5: Differences between Implantation by France and Spanish law legacy								
Spanish law leg. = Imp. by France	0.00	0.33	0.66	0.01	0.04	0.01	0.00	0.67
Spanish law leg. x PD = Imp. by France x PD	0.23	0.60	0.19	0.76	0.46	0.64	0.58	0.56

NOTES: Dependent variable is stock market capitalization, which represents the total value of listed shares over GDP. Variable descriptions are provided in Appendix I. The sample contains non-European countries colonized by Western powers (Appendix II). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. At the bottom we show the p-values of the Wald tests of equality of coefficients. PD means population density.

UNPUBLISHED APPENDIX III. TABLE 3

HIGHER DISAGGREGATION OF THE CIVIL LAW: PROTECTION OF PROPERTY RIGHTS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
- Common law (Ref. group)								
- Civil law:								
• Implantation by France	-26.23***	-12.424**	-26.843***	-25.232***	-22.011***	-21.777***	-21.166***	-21.743***
	(5.977)	(6.143)	(6.377)	(5.442)	(7.317)	(6.585)	(5.732)	(7.808)
• Spanish law legacy	-15.679***	-18.067***	-19.696**	-10.567	-17.715***	-14.116**	-10.758*	-21.108**
	(5.49)	(4.515)	(8.076)	(11.048)	(5.293)	(5.51)	(5.553)	(8.803)
• Portuguese colonies	-18.285**	-8.517	-18.253**	-15.217**	-16.23**	-16.072**	-18.643***	-14.89*
	(7.05)	(7.164)	(7.526)	(7.617)	(6.528)	(6.987)	(3.897)	(8.222)
• British colonies	-7.873	-21.839***	-8.682	-7.725	-2.939	-9.796**	-6.788	-11.849**
	(5.227)	(4.637)	(6.606)	(5.957)	(3.703)	(4.698)	(5.873)	(5.697)
• Belgian colonies	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
• Dutch colonies	-14.691***	-13.016***	-14.353***	-14.707***	-11.445***	-8.47*	-7.581*	-19.403***
	(3.659)	(2.426)	(3.857)	(3.587)	(3.638)	(4.968)	(4.068)	(4.54)
• Others (Italian and US)	-19.543***	-11.082***	-21.689***	-13.748	-26.88***	-15.737***	-10.47**	-25.064***
	(3.659)	(2.765)	(4.571)	(10.874)	(6.226)	(4.262)	(5.065)	(4.714)
- Common law x Pop. dens.	-7.449***	-3.583**	-7.162***	-7.244***	-7.056***	-6.149***	-6.282***	-7.378***
	(1.558)	(1.385)	(1.692)	(1.622)	(1.509)	(1.815)	(1.736)	(1.347)
- Civil law x Pop. dens.:								
• Implantation by France x Pop. dens.	1.564	-2.547	2.428	1.569	-1.336	-1.309	0.656	0.242
	(2.746)	(3.014)	(3.698)	(2.687)	(3.762)	(3.058)	(2.676)	(3.756)
• Spanish law legacy x Pop. dens.	-4.103	-3.157	-3.913	-3.936	-2.841	-1.075	-2.617	-3.743
	(5.152)	(5.197)	(5.263)	(5.087)	(5.194)	(5.139)	(5.15)	(5.225)
• Portuguese colonies x Pop. dens.	-12.909**	-6.428	-11.512*	-14.048**	-11.31**	-13.17***	-10.4***	-9.814
	(4.932)	(5.145)	(6.182)	(5.733)	(4.595)	(4.562)	(0.924)	(6.622)
• British colonies x Pop. dens.	0.096	4.481***	-0.328	0.127	-1.038	-0.279	0.096	1.298
	(0.773)	(1.128)	(1.554)	(0.82)	(0.896)	(0.702)	(0.783)	(1.381)
• Belgian colonies x Pop. dens.	-7.575***	-1.258	-7.439***	-6.479***	-8.784***	-5.391***	-5.498***	-5.962***
	(1.137)	(1.638)	(1.225)	(2.05)	(1.438)	(1.628)	(1.222)	(1.353)
• Dutch colonies x Pop. dens.	-6.667***	-4.813***	-7.001***	-6.264**	-6.656***	-6.811***	-6.93***	-5.788*
	(0)	(0.367)	(0.627)	(2.575)	(-0.007)	(0.068)	(0.213)	(3.056)
• Others (Italian and US) x Pop. dens.	-9.359***	-15.674***	-8.531***	-11.498***	-5.005*	-11.79***	-12.37***	-5.323**
	(0)	(1.249)	(1.555)	(4.262)	(2.646)	(1.137)	(2.439)	(2.502)
Ln GDP pc		8.763***						
		(1.733)						
Years since independence			0.033					
			(0.063)					
Religion (p-value)				[0.9624]				
Ethnic fractionalization					-16.812			
					(10.214)			
Latitude						38.946**		
						(18.228)		
Land in tropics							-6.433	
							(5.213)	
Latin America and Caribbean								2.637
								(9.168)
Africa								-8.626
								(5.347)
Constant	54.381***	-20.756	52.692***	62.467***	63.478***	46.206***	53.297***	57.816***
	(3.659)	(14.717)	(5.466)	(22.117)	(7.143)	(5.641)	(4.495)	(3.831)
R-squared	0.45	0.62	0.45	0.45	0.48	0.49	0.46	0.48
Number of observations	92	91	88	92	91	92	87	92
Wald tests								
H3: Differences in the interaction terms								
Common law x PD = Imp. by France x PD	0.01	0.77	0.02	0.01	0.18	0.22	0.03	0.06
Common law x PD = Spanish law leg. x PD	0.54	0.94	0.55	0.54	0.44	0.34	0.50	0.50
Common law x PD = Portuguese col. x PD	0.29	0.58	0.47	0.25	0.38	0.16	0.04	0.72
Common law x PD = British col. x PD	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Common law x PD = Belgian col. x PD	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
Common law x PD = Duch col. x PD	0.62	0.31	0.94	0.73	0.79	0.72	0.72	0.65
Common law x PD = Others x PD	0.22	0.00	0.40	0.33	0.46	0.03	0.07	0.44
H4: Differences in predicted values when pop. dens. is equal to 10 (log=2.3)								
Common law = Imp. by France	0.34	0.04	0.48	0.41	0.15	0.09	0.37	0.47
Common law = Spanish law leg.	0.51	0.15	0.39	0.85	0.50	0.84	0.85	0.34
Common law = Portuguese col.	0.00	0.16	0.03	0.01	0.01	0.00	0.00	0.14
Common law = British col.	0.10	0.48	0.30	0.11	0.03	0.54	0.23	0.15
Common law = Belgian col.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
Common law = Duch col.	0.01	0.00	0.01	0.06	0.01	0.04	0.05	0.01
Common law = Others	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H5: Differences between Implantation by France and Spanish law legacy								
Spanish law leg. = Imp. by France	0.10	0.41	0.49	0.22	0.59	0.20	0.09	0.95
Spanish law leg. x PD = Imp. by France x PD	0.33	0.92	0.33	0.34	0.82	0.97	0.57	0.54

NOTES: Dependent variable is protection of property rights, which reflects the level of protection of property rights and ranges from 0 to 100, where higher values mean stronger protection. Variable descriptions are provided in Appendix I. The sample contains non-European countries colonized by Western powers (Appendix II). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. At the bottom we show the p-values of the Wald tests of equality of coefficients. PD means population density.

UNPUBLISHED APPENDIX IV. TABLE 1

DELETING THE GROUP "OTHERS" : PRIVATE CREDIT

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Population density in 1500								
- Common law (Ref. group)								
- Civil law:								
• Implantation by France	-0.42***	-0.195**	-0.471***	-0.421***	-0.357***	-0.343***	-0.335***	-0.265***
	(0.061)	(0.073)	(0.065)	(0.059)	(0.07)	(0.071)	(0.07)	(0.084)
• Spanish law legacy	-0.203***	-0.231***	-0.488***	-0.228**	-0.194***	-0.167**	-0.119	-0.255***
	(0.068)	(0.064)	(0.123)	(0.099)	(0.069)	(0.068)	(0.077)	(0.053)
• Others	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
- Common law x Pop. dens.	-0.144***	-0.07***	-0.128***	-0.142***	-0.126***	-0.112***	-0.117***	-0.136***
	(0.031)	(0.025)	(0.031)	(0.03)	(0.03)	(0.029)	(0.03)	(0.024)
- Civil law x Pop. dens.:								
• Implantation by France x Pop. dens.	0.071*	0.007	0.127***	0.052	0.046	0.031	0.066*	0.016
	(0.037)	(0.044)	(0.046)	(0.04)	(0.037)	(0.041)	(0.037)	(0.066)
• Spanish law legacy x Pop. dens.	0	0.015	0.013	-0.001	0.011	0.043	0.009	0.008
	(0.029)	(0.037)	(0.032)	(0.032)	(0.03)	(0.039)	(0.032)	(0.029)
• Others x Pop. dens.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
Ln GDP pc		0.137***						
		(0.028)						
Years since independence			0.002**					
			(0.001)					
Religion (p-value)				[0.5504]				
Ethnic fractionalization					-0.147			
					(0.113)			
Latitude						0.543*		
						(0.306)		
Land in tropics							-0.037	
							(0.071)	
Latin America and Caribbean								-0.076
								(0.086)
Africa								-0.303***
								(0.092)
Constant	0.49***	-0.693***	0.385***	0.329	0.543***	0.361***	0.428***	0.631***
	(0.056)	(0.226)	(0.078)	(0.205)	(0.075)	(0.088)	(0.083)	(0.08)
R-squared	0.45	0.58	0.51	0.43	0.43	0.45	0.37	0.58
Number of observations	82	80	80	81	81	81	72	82
Wald tests								
H3: Differences in the interaction terms								
Common law x PD = Imp. by France x PD	0.00	0.15	0.00	0.00	0.00	0.01	0.00	0.03
Common law x PD = Spanish law leg. x PD	0.00	0.05	0.00	0.00	0.00	0.00	0.01	0.00
Common law x PD = Others x PD	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
H4: Differences in predicted values when pop. dens. is equal to 10 (log=2.3)								
Common law = Imp. by France	0.38	0.80	0.21	0.77	0.63	0.85	0.33	0.46
Common law = Spanish law leg.	0.21	0.75	0.32	0.52	0.23	0.11	0.12	0.44
Common law = Others	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
H5: Differences between Implantation by France and Spanish law legacy								
Spanish law leg. = Imp. by France	0.00	0.67	0.90	0.04	0.01	0.00	0.00	0.90
Spanish law leg. x PD = Imp. by France x PD	0.14	0.89	0.04	0.33	0.49	0.85	0.26	0.91

NOTES: Dependent variable is private credit by deposit money banks and other non-bank financial institutions over GDP. Variable descriptions are provided in Appendix I. The sample contains non-European countries colonized by Western powers (Appendix II). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. At the bottom we show the p-values of the Wald tests of equality of coefficients. PD means population density.

UNPUBLISHED APPENDIX IV. TABLE 2

DELETING THE GROUP "OTHERS" : STOCK MARKET DEVELOPMENT

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Population density in 1500								
- Common law (Ref. group)								
- Civil law:								
• Implantation by France	-0.487***	-0.226**	-0.499***	-0.372***	-0.397***	-0.426***	-0.371***	-0.256**
	(0.093)	(0.092)	(0.086)	(0.078)	(0.094)	(0.116)	(0.086)	(0.096)
• Spanish law legacy	-0.324***	-0.33***	-0.415**	0.041	-0.278***	-0.266**	-0.21**	-0.202*
	(0.104)	(0.086)	(0.156)	(0.136)	(0.087)	(0.101)	(0.099)	(0.112)
• Others	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
- Common law x Pop. dens.	-0.161***	-0.054*	-0.156**	-0.137***	-0.116***	-0.117***	-0.087***	-0.144***
	(0.052)	(0.031)	(0.062)	(0.039)	(0.034)	(0.043)	(0.026)	(0.046)
- Civil law x Pop. dens.:								
• Implantation by France x Pop. dens.	0.034**	-0.039	0.047**	-0.024	0.015	0.031	0.024	-0.061
	(0.015)	(0.035)	(0.023)	(0.047)	(0.028)	(0.043)	(0.023)	(0.056)
• Spanish law legacy x Pop. dens.	-0.022	-0.007	-0.018	0.007	-0.013	-0.019	-0.009	-0.02
	(0.042)	(0.041)	(0.042)	(0.063)	(0.043)	(0.056)	(0.046)	(0.043)
• Others x Pop. dens.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
Ln GDP pc		0.142***						
		(0.04)						
Years since independence			0.001					
			(0.002)					
Religion (p-value)				[0.0846]				
Ethnic fractionalization					-0.116			
					(0.142)			
Latitude						0.037		
						(0.502)		
Land in tropics							-0.056	
							(0.102)	
Latin America and Caribbean								-0.391**
								(0.171)
Africa								-0.457***
								(0.15)
Constant	0.473***	-0.777**	0.438***	0.336	0.475***	0.408**	0.392***	0.745***
	(0.092)	(0.328)	(0.148)	(0.319)	(0.096)	(0.153)	(0.086)	(0.145)
R-squared	0.35	0.47	0.35	0.39	0.33	0.33	0.29	0.47
Number of observations	78	76	76	77	77	77	71	78
Wald tests								
H3: Differences in the interaction terms								
Common law x PD = Imp. by France x PD	0.00	0.77	0.00	0.01	0.01	0.06	0.00	0.21
Common law x PD = Spanish law leg. x PD	0.04	0.34	0.05	0.07	0.06	0.07	0.14	0.05
Common law x PD = Others x PD	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
H4: Differences in predicted values when pop. dens. is equal to 10 (log=2.3)								
Common law = Imp. by France	0.67	0.02	0.73	0.25	0.20	0.41	0.12	0.56
Common law = Spanish law leg.	0.97	0.07	0.70	0.08	0.72	0.78	0.82	0.60
Common law = Others	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
H5: Differences between Implantation by France and Spanish law legacy								
Spanish law leg. = Imp. by France	0.00	0.30	0.64	0.01	0.07	0.01	0.00	0.64
Spanish law leg. x PD = Imp. by France x PD	0.21	0.57	0.16	0.71	0.61	0.57	0.56	0.56

NOTES: Dependent variable is stock market capitalization, which represents the total value of listed shares over GDP. Variable descriptions are provided in Appendix I. The sample contains non-European countries colonized by Western powers (Appendix II). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. At the bottom we show the p-values of the Wald tests of equality of coefficients. PD means population density.

UNPUBLISHED APPENDIX IV. TABLE 3

DELETING THE GROUP "OTHERS" : PROTECTION OF PROPERTY RIGHTS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Population density in 1500								
- Common law (Ref. group)								
- Civil law:								
• Implantation by France	-26.23***	-11.984**	-26.995***	-24.357***	-22.231***	-22.102***	-21.201***	-21.014***
	(5.701)	(5.955)	(6.197)	(5.173)	(6.961)	(6.277)	(5.451)	(7.724)
• Spanish law legacy	-15.679***	-18.192***	-22.575***	-5.876	-17.609***	-14.23***	-10.789**	-22.83***
	(5.236)	(4.301)	(7.802)	(10.69)	(5.062)	(5.279)	(5.293)	(8.474)
• Others	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
- Common law x Pop. dens.	-7.449***	-3.444**	-6.957***	-7.3***	-7.076***	-6.244***	-6.306***	-7.379***
	(1.486)	(1.35)	(1.594)	(1.544)	(1.441)	(1.72)	(1.654)	(1.274)
- Civil law x Pop. dens.:								
• Implantation by France x Pop. dens.	1.564	-2.691	2.622	1.134	-1.185	-1.1	0.682	0.12
	(2.619)	(2.911)	(3.58)	(2.583)	(3.589)	(2.921)	(2.546)	(3.732)
• Spanish law legacy x Pop. dens.	-4.103	-3.124	-3.777	-3.623	-2.907	-1.295	-2.66	-3.652
	(4.914)	(4.962)	(5.033)	(4.644)	(4.955)	(4.913)	(4.905)	(4.994)
• Others x Pop. dens.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
Ln GDP pc		9.068***						
		(1.787)						
Years since independence			0.057					
			(0.062)					
Religion (p-value)				[0.7811]				
Ethnic fractionalization					-15.937			
					(10.045)			
Latitude						36.105**		
						(17.682)		
Land in tropics							-6.247	
							(5.05)	
Latin America and Caribbean								4.271
								(8.913)
Africa								-9.828*
								(5.342)
Constant	54.381***	-23.336	51.481***	65.009***	63.005***	46.802***	53.217***	58.065***
	(3.49)	(15.126)	(5.319)	(21.618)	(6.961)	(5.413)	(4.299)	(3.734)
R-squared	0.42	0.6	0.42	0.43	0.44	0.45	0.41	0.47
Number of observations	75	74	73	75	75	75	71	75
Wald tests								
H3: Differences in the interaction terms								
Common law x PD = Imp. by France x PD	0.00	0.83	0.02	0.01	0.15	0.17	0.02	0.07
Common law x PD = Spanish law leg. x PD	0.52	0.95	0.54	0.45	0.42	0.33	0.48	0.47
Common law x PD = Others x PD	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
H4: Differences in predicted values when pop. dens. is equal to 10 (log=2.3)								
Common law = Imp. by France	0.32	0.03	0.45	0.39	0.14	0.09	0.36	0.51
Common law = Spanish law leg.	0.49	0.12	0.26	0.86	0.48	0.81	0.84	0.27
Common law = Others	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
H5: Differences between Implantation by France and Spanish law legacy								
Spanish law leg. = Imp. by France	0.08	0.35	0.68	0.11	0.55	0.17	0.08	0.87
Spanish law leg. x PD = Imp. by France x PD	0.31	0.94	0.30	0.37	0.79	0.97	0.55	0.55

NOTES: Dependent variable is protection of property rights, which reflects the level of protection of property rights and ranges from 0 to 100, where higher values mean stronger protection. Variable descriptions are provided in Appendix I. The sample contains non-European countries colonized by Western powers (Appendix II). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. At the bottom we show the p-values of the Wald tests of equality of coefficients. PD means population density.

UNPUBLISHED APPENDIX V. TABLE 1
LEGAL TRANSPLANT INDICATOR

	(1) Transplant indicator as control			(2) Deleting Chile and Argentina.		
	Coef.	Std. Err.	P-value	Coef.	Std. Err.	P-value
Implantation by France	N. A.	N. A.	N. A.	-0.42	0.061	0.000
Spanish law legacy	-0.427	0.114	0.001	-0.215	0.067	0.002
Others	-0.314	0.114	0.013	-0.264	0.069	0.000
Common law x Pop. dens.	-0.16	0.036	0.000	-0.144	0.031	0.000
Implantation by France x Pop. dens.	N. A.	N. A.	N. A.	0.071	0.038	0.062
Spanish law legacy x Pop. dens.	0.002	0.044	0.962	-0.016	0.029	0.587
Others x Pop. dens.	0.031	0.024	0.211	0.016	0.025	0.538
Receptive transplant (or origin country)	0.033	0.187	0.860			
Constant	0.694	0.111	0.000	0.49	0.056	0.000
R-squared		0.67			0.44	
Number of observations		27			98	
Wald tests						
H3: Differences in the interaction terms:						
Common law x PD = Imp. by France x PD		N. A.			0.00	
Common law x PD = Spanish law leg. x PD		0.00			0.00	
Common law x PD = Others x PD		0.00			0.00	
H4: Differences in predicted values when pop. dens. is equal to 10 (log=2.3):						
Common law = Imp. by France		N. A.			0.39	
Common law = Spanish law leg.		0.73			0.43	
Common law = Others		0.32			0.22	
H5: Differences between Implantation by France and Spanish law legacy:						
Spanish law leg. = Imp. by France		N. A.			0.00	
Spanish law leg. x PD = Imp. by France x PD		N. A.			0.07	

NOTES: Dependent variable is private credit by deposit money banks and other non-bank financial institutions over GDP. Variable descriptions are provided in Appendix I. The sample contains non-European countries colonized by Western powers (Appendix II). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. At the bottom we show the p-values of the Wald tests of equality of coefficients. PD means population density.

UNPUBLISHED APPENDIX V. TABLE 2

TRANSPLANT INDICATOR FOR COUNTRIES INCLUDED IN THE SAMPLE OF THE BASELINE REGRESSION (TABLE 2)

	Transplant type	Origin country		Transplant type	Origin country
Common law tradition:			**Civil law tradition:**		
Singapore	Unreceptive	No	Ecuador	Unreceptive	No
Canada	Receptive	No	Chile	Receptive	No
United States	-	Yes	Colombia	Unreceptive	No
Pakistan	Unreceptive	No	Jordan	Unreceptive	No
South Africa	Unreceptive	No	Mexico	Unreceptive	No
Kenya	Unreceptive	No	Uruguay	Unreceptive	No
India	Unreceptive	No	Argentina	Receptive	No
Malaysia	Unreceptive	No	Philippines	Unreceptive	No
Nigeria	Unreceptive	No	Indonesia	Unreceptive	No
Sri Lanka	Unreceptive	No	Egypt, Arab Rep.	Unreceptive	No
Zimbabwe	Unreceptive	No	Brazil	Unreceptive	No
Hong Kong SAR, China	Unreceptive	No	Venezuela, RB	Unreceptive	No
Australia	Receptive	No	Peru	Unreceptive	No
New Zealand	Receptive	No			

Note: Data from Berkowitz et al. (2003, EER)

UNPUBLISHED APPENDIX VI. TABLE 1
YEARS SINCE INDEPENDENCE AS DISCRIMINATING FACTOR AMONG CIVIL LAW COUNTRIES: PRIVATE CREDIT

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
- Common law (Ref. group)								
- Civil law:								
• Early independence	-0.197***	-0.195***	-0.639***	-0.232***	-0.192***	-0.161**	-0.109	-0.272***
	(0.067)	(0.058)	(0.144)	(0.086)	(0.068)	(0.068)	(0.076)	(0.056)
• Later independence	-0.352***	-0.262***	-0.322***	-0.372***	-0.289***	-0.294***	-0.277***	-0.275***
	(0.062)	(0.055)	(0.064)	(0.059)	(0.067)	(0.064)	(0.073)	(0.06)
- Common law x Pop. dens.	-0.144***	-0.081***	-0.121***	-0.146***	-0.125***	-0.11***	-0.115***	-0.136***
	(0.031)	(0.025)	(0.034)	(0.03)	(0.03)	(0.028)	(0.03)	(0.024)
- Civil law x Pop. dens.:								
• Early independence x Pop. dens.	-0.002	0.02	-0.001	-0.003	0.005	0.027	0.006	-0.002
	(0.024)	(0.028)	(0.026)	(0.026)	(0.026)	(0.035)	(0.027)	(0.024)
• Later independence x Pop. dens.	0.032	0.046**	0.018	0.018	0.015	0.021	0.035*	0.049**
	(0.02)	(0.018)	(0.019)	(0.02)	(0.019)	(0.016)	(0.019)	(0.023)
Ln GDP pc		0.111***						
		(0.019)						
Years since independence			0.003***					
			(0.001)					
Religion (p-value)				[0.2362]				
Ethnic fractionalization					-0.182*			
					(0.105)			
Latitude						0.593**		
						(0.257)		
Land in tropics							-0.056	
							(0.06)	
Latin America and Caribbean								-0.068
								(0.076)
Africa								-0.314***
								(0.073)
Constant	0.49***	-0.476***	0.339***	0.297	0.56***	0.351***	0.436***	0.632***
	(0.055)	(0.153)	(0.092)	(0.185)	(0.073)	(0.081)	(0.079)	(0.071)
R-squared	0.45	0.58	0.51	0.43	0.42	0.45	0.36	0.59
Number of observations	96	94	96	95	94	95	85	96
Wald tests								
H3: Differences in the interaction terms								
Common law x PD = Early indep. x PD	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Common law x PD = Later indep. x PD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H4: Differences in predicted values when pop. dens. is equal to 10 (log=2.3)								
Common law = Early indep.	0.18	0.70	0.09	0.45	0.26	0.16	0.10	0.71
Common law = Later indep.	0.43	0.57	0.98	0.93	0.58	0.88	0.31	0.03
H5: Differences between Early indep. and Later indep.								
Early indep. = Later indep.	0.00	0.19	0.07	0.06	0.10	0.01	0.00	0.97
Early indep. x PD = Later indep. x PD	0.28	0.43	0.55	0.52	0.78	0.89	0.40	0.13

NOTES: Dependent variable is private credit by deposit money banks and other non-bank financial institutions over GDP. Variable descriptions are provided in Appendix I. The sample contains non-European countries colonized by Western powers (Appendix II). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. At the bottom we show the p-values of the Wald tests of equality of coefficients. PD means population density. 'Early independence' indicates countries enjoying more than 150 years of independence.

UNPUBLISHED APPENDIX VI. TABLE 2

YEARS SINCE INDEPENDENCE AS DISCRIMINATING FACTOR AMONG CIVIL LAW COUNTRIES: STOCK MARKET DEVELOPMENT

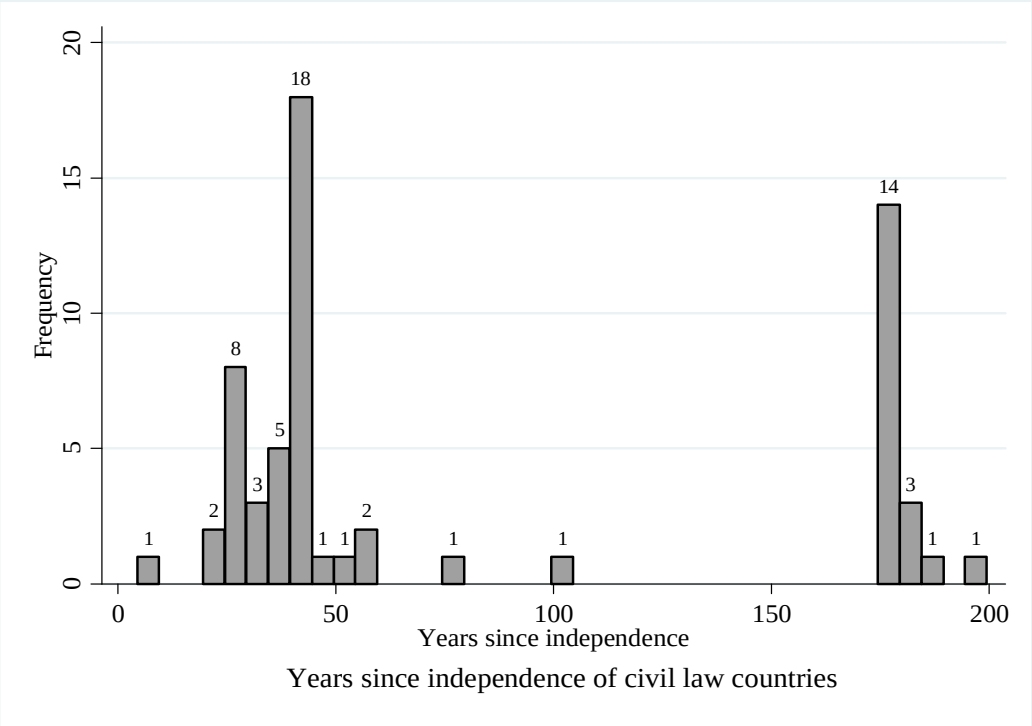
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
- Common law (Ref. group)								
- Civil law:								
• Early independence	-0.322***	-0.301***	-0.499*	-0.053	-0.281***	-0.255**	-0.196**	-0.195
	(0.102)	(0.079)	(0.288)	(0.151)	(0.086)	(0.097)	(0.096)	(0.123)
• Later independence	-0.367***	-0.244***	-0.354***	-0.3***	-0.271**	-0.288**	-0.246**	-0.265***
	(0.112)	(0.083)	(0.126)	(0.086)	(0.112)	(0.119)	(0.105)	(0.088)
- Common law x Pop. dens.	-0.161***	-0.055*	-0.151**	-0.143***	-0.114***	-0.109**	-0.081***	-0.141***
	(0.052)	(0.029)	(0.068)	(0.037)	(0.033)	(0.042)	(0.026)	(0.046)
- Civil law x Pop. dens.:								
• Early independence x Pop. dens.	-0.03	-0.003	-0.03	-0.011	-0.024	-0.017	-0.015	-0.03
	(0.033)	(0.031)	(0.032)	(0.044)	(0.035)	(0.04)	(0.037)	(0.033)
• Later independence x Pop. dens.	-0.011	0.015	-0.016	-0.035	-0.031	-0.016	-0.016	0.012
	(0.03)	(0.021)	(0.031)	(0.036)	(0.038)	(0.031)	(0.029)	(0.025)
Ln GDP pc		0.141***						
		(0.029)						
Years since independence			0.001					
			(0.003)					
Religion (p-value)				[0.1235]				
Ethnic fractionalization					-0.164			
					(0.145)			
Latitude						0.277		
						(0.444)		
Land in tropics							-0.103	
							(0.096)	
Latin America and Caribbean								-0.436***
								(0.163)
Africa								-0.524***
								(0.129)
Constant	0.473***	-0.767***	0.41**	0.254	0.5***	0.358**	0.412***	0.782***
	(0.092)	(0.235)	(0.19)	(0.307)	(0.099)	(0.143)	(0.086)	(0.132)
R-squared	0.31	0.47	0.32	0.33	0.28	0.28	0.23	0.5
Number of observations	88	86	88	87	87	87	81	88
Wald tests								
H3: Differences in the interaction terms								
Common law x PD = Early indep. x PD	0.04	0.22	0.11	0.03	0.06	0.05	0.14	0.05
Common law x PD = Later indep. x PD	0.01	0.05	0.11	0.01	0.12	0.11	0.13	0.00
H4: Differences in predicted values when pop. dens. is equal to 10 (log=2.3)								
Common law = Early indep.	0.86	0.07	0.60	0.20	0.53	0.72	0.72	0.72
Common law = Later indep.	0.81	0.20	0.70	0.52	0.30	0.34	0.17	0.39
H5: Differences between Early indep. and Later indep.								
Early indep. = Later indep.	0.56	0.40	0.69	0.10	0.91	0.67	0.50	0.59
Early indep. x PD = Later indep. x PD	0.66	0.63	0.77	0.68	0.89	0.99	0.98	0.31

NOTES: Dependent variable is stock market capitalization, which represents the total value of listed shares over GDP. Variable descriptions are provided in Appendix I. The sample contains non-European countries colonized by Western powers (Appendix II). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. At the bottom we show the p-values of the Wald tests of equality of coefficients. PD means population density. 'Early independence' indicates countries enjoying more than 150 years of independence.

UNPUBLISHED APPENDIX VI. TABLE 3
YEARS SINCE INDEPENDENCE AS DISCRIMINATING FACTOR AMONG CIVIL LAW COUNTRIES: PROTECTION OF PROPERTY RIGHTS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
- Common law (Ref. group)								
- Civil law:								
• Early independence	-16.743***	-17.219***	-33.229***	-19.492**	-19.613***	-15.339***	-11.583**	-30.258***
	(5.25)	(4.101)	(7.997)	(9.533)	(5.035)	(5.317)	(5.258)	(8.663)
• Later independence	-18.892***	-14.179***	-17.122***	-19.728***	-14.906***	-16.32***	-16.552***	-15.528***
	(5.015)	(4.302)	(5.316)	(4.376)	(4.848)	(5.077)	(4.582)	(4.75)
- Common law x Pop. dens.	-7.449***	-4.188***	-6.356***	-7.405***	-6.912***	-6.207***	-6.238***	-7.426***
	(1.477)	(1.316)	(1.599)	(1.554)	(1.434)	(1.675)	(1.644)	(1.304)
- Civil law x Pop. dens.:								
• Early independence x Pop. dens.	-4.827	-3.403	-4.801	-5.149	-3.924	-3.036	-3.82	-4.827
	(3.714)	(3.642)	(3.847)	(3.948)	(3.855)	(3.781)	(3.672)	(3.761)
• Later independence x Pop. dens.	-2.431	-1.27	-2.962	-2.24	-4.708*	-3.053	-1.522	-1.146
	(2.531)	(2.437)	(2.439)	(2.506)	(2.431)	(2.409)	(2.204)	(2.65)
Ln GDP pc		7.426***						
		(1.501)						
Years since independence			0.127*					
			(0.065)					
Religion (p-value)				[0.9406]				
Ethnic fractionalization					-22.989**			
					(8.805)			
Latitude						37.218**		
						(15.654)		
Land in tropics							-6.763	
							(4.514)	
Latin America and Caribbean								10.566
								(8.193)
Africa								-10.719**
								(4.504)
Constant	54.381***	-9.475	47.941***	56.247***	66.82***	46.569***	53.439***	57.331***
	(3.468)	(12.895)	(5.752)	(19.339)	(6.393)	(5.053)	(4.106)	(3.479)
R-squared	0.38	0.55	0.4	0.38	0.43	0.42	0.38	0.46
Number of observations	88	87	88	88	87	88	83	88
Wald tests								
H3: Differences in the interaction terms								
Common law x PD = Early indep. x PD	0.51	0.84	0.71	0.59	0.47	0.44	0.55	0.52
Common law x PD = Later indep. x PD	0.09	0.26	0.25	0.07	0.45	0.29	0.08	0.04
H4: Differences in predicted values when pop. dens. is equal to 10 (log=2.3)								
Common law = Early indep.	0.30	0.09	0.03	0.29	0.22	0.44	0.55	0.05
Common law = Later indep.	0.21	0.12	0.09	0.20	0.08	0.11	0.29	0.85
H5: Differences between Early indep. and Later indep.								
Early indep. = Later indep.	0.69	0.53	0.12	0.98	0.37	0.84	0.33	0.09
Early indep. x PD = Later indep. x PD	0.60	0.62	0.69	0.53	0.87	1.00	0.59	0.43

NOTES: Dependent variable is protection of property rights, which reflects the level of protection of property rights and ranges from 0 to 100, where higher values mean stronger protection. Variable descriptions are provided in Appendix I. The sample contains non-European countries colonized by Western powers (Appendix II). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. At the bottom we show the p-values of the Wald tests of equality of coefficients. PD means population density. 'Early independence' indicates countries enjoying more than 150 years of independence.



UNPUBLISHED APPENDIX VI. FIG. 1.
Histogram of the variable "years since independence" for countries of the civil law tradition.

UNPUBLISHED APPENDIX VII. TABLE 1

COMPARISON ACROSS CIVIL LAW GROUPS: PRIVATE CREDIT

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
- Common law (Ref. group)								
- Civil law:								
• Implantation by France	-0.42***	-0.231***	-0.47***	-0.427***	-0.351***	-0.335***	-0.33***	-0.271***
	(0.061)	(0.064)	(0.065)	(0.06)	(0.068)	(0.07)	(0.071)	(0.079)
• Spanish law legacy	-0.203***	-0.221***	-0.476***	-0.236***	-0.195***	-0.164**	-0.114	-0.26***
	(0.068)	(0.064)	(0.106)	(0.086)	(0.069)	(0.068)	(0.078)	(0.053)
• Others	-0.264***	-0.231***	-0.296***	-0.3***	-0.214***	-0.215***	-0.182**	-0.269***
	(0.069)	(0.058)	(0.065)	(0.066)	(0.068)	(0.068)	(0.08)	(0.059)
- Common law x Pop. dens.	-0.144***	-0.08***	-0.129***	-0.146***	-0.126***	-0.109***	-0.114***	-0.136***
	(0.031)	(0.025)	(0.03)	(0.03)	(0.03)	(0.029)	(0.031)	(0.024)
- Civil law x Pop. dens.:								
• Implantation by France x Pop. dens.	0.071*	0.018	0.126***	0.046	0.042	0.025	0.062	0.019
	(0.038)	(0.041)	(0.046)	(0.039)	(0.037)	(0.04)	(0.037)	(0.063)
• Spanish law legacy x Pop. dens.	0	0.012	0.013	-0.002	0.013	0.049	0.015	0.008
	(0.029)	(0.035)	(0.031)	(0.032)	(0.03)	(0.038)	(0.032)	(0.029)
• Others x Pop. dens.	0.016	0.043*	0.004	0.007	0.011	0.008	0.013	0.04*
	(0.025)	(0.023)	(0.016)	(0.023)	(0.026)	(0.02)	(0.025)	(0.02)
Ln GDP pc		0.113***						
		(0.019)						
Years since independence			0.002***					
			(0.001)					
Religion (p-value)				[0.182]				
Ethnic fractionalization					-0.165			
					(0.1)			
Latitude						0.623**		
						(0.26)		
Land in tropics							-0.065	
							(0.058)	
Latin America and Caribbean								-0.06
								(0.07)
Africa								-0.288***
								(0.071)
Constant	0.49***	-0.487***	0.389***	0.303	0.552***	0.345***	0.44***	0.62***
	(0.056)	(0.159)	(0.071)	(0.187)	(0.071)	(0.082)	(0.08)	(0.07)
R-squared	0.44	0.56	0.51	0.42	0.41	0.45	0.35	0.57
Number of observations	100	98	96	99	98	99	89	100
Wald tests								
Implantation by France = Spanish law legacy	0.00	0.89	0.96	0.02	0.01	0.00	0.00	0.90
Implantation by France = Others	0.00	1.00	0.00	0.01	0.00	0.01	0.00	0.98
Spanish law legacy = Others	0.28	0.87	0.10	0.36	0.75	0.33	0.25	0.89
Implantation by France = Spanish law legacy = Others	0.00	0.99	0.01	0.01	0.01	0.00	0.00	0.99
Implantation by France x PD = Spanish law legacy x PD	0.14	0.92	0.04	0.36	0.55	0.69	0.35	0.87
Implantation by France x PD = Others x PD	0.23	0.61	0.01	0.38	0.47	0.71	0.29	0.76
Spanish law legacy x PD = Others x PD	0.69	0.45	0.81	0.83	0.96	0.35	0.96	0.36
Implantation by France x PD = Spanish law legacy x PD = Others x PD	0.32	0.71	0.05	0.62	0.75	0.61	0.54	0.65
Com-law x PD= Implantation by France x PD = Spanish law legacy x PD = Others x PD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

NOTES: Dependent variable is private credit by deposit money banks and other non-bank financial institutions over GDP. Variable descriptions are provided in Appendix I. The sample contains non-European countries colonized by Western powers (Appendix II). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. At the bottom we show the p-values of the Wald tests of equality of coefficients. PD means population density.

UNPUBLISHED APPENDIX VII. TABLE 2

COMPARISON ACROSS CIVIL LAW GROUPS: STOCK MARKET DEVELOPMENT

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
- Common law (Ref. group)								
- Civil law:								
• Implantation by France	-0.487***	-0.221**	-0.5***	-0.394***	-0.402***	-0.384***	-0.352***	-0.247***
	(0.093)	(0.087)	(0.088)	(0.084)	(0.092)	(0.114)	(0.088)	(0.091)
• Spanish law legacy	-0.324***	-0.331***	-0.422***	-0.024	-0.277***	-0.253**	-0.196**	-0.21*
	(0.104)	(0.084)	(0.133)	(0.132)	(0.088)	(0.099)	(0.097)	(0.107)
• Others	-0.208	-0.167*	-0.227*	-0.101	-0.141	-0.128	-0.081	-0.241**
	(0.128)	(0.088)	(0.133)	(0.109)	(0.118)	(0.125)	(0.118)	(0.102)
- Common law x Pop. dens.	-0.161***	-0.053*	-0.155**	-0.145***	-0.116***	-0.106**	-0.077***	-0.143***
	(0.052)	(0.029)	(0.06)	(0.038)	(0.034)	(0.043)	(0.026)	(0.047)
- Civil law x Pop. dens.:								
• Implantation by France x Pop. dens.	0.034**	-0.04	0.047**	-0.033	0.018	0.002	0.009	-0.064
	(0.015)	(0.032)	(0.023)	(0.045)	(0.027)	(0.04)	(0.024)	(0.055)
• Spanish law legacy x Pop. dens.	-0.022	-0.006	-0.018	0.002	-0.015	0.008	0.01	-0.019
	(0.042)	(0.041)	(0.042)	(0.059)	(0.043)	(0.053)	(0.045)	(0.043)
• Others x Pop. dens.	0.007	0.051	-0.026	-0.016	0.001	0.003	0	0.02
	(0.041)	(0.035)	(0.031)	(0.035)	(0.044)	(0.037)	(0.037)	(0.028)
Ln GDP pc		0.145***						
		(0.03)						
Years since independence			0.001					
			(0.001)					
Religion (p-value)				[0.018]				
Ethnic fractionalization					-0.098			
					(0.134)			
Latitude						0.391		
						(0.457)		
Land in tropics							-0.138	
							(0.091)	
Latin America and Caribbean								-0.388***
								(0.14)
Africa								-0.473***
								(0.118)
Constant	0.473***	-0.807***	0.435***	0.259	0.466***	0.335**	0.426***	0.751***
	(0.093)	(0.243)	(0.138)	(0.306)	(0.094)	(0.147)	(0.086)	(0.128)
R-squared	0.33	0.48	0.34	0.37	0.3	0.31	0.28	0.48
Number of observations	92	90	88	91	91	91	85	92
Wald tests								
Implantation by France = Spanish law legacy	0.00	0.20	0.62	0.01	0.05	0.02	0.00	0.73
Implantation by France = Others	0.00	0.53	0.01	0.00	0.01	0.00	0.00	0.95
Spanish law legacy = Others	0.25	0.03	0.24	0.54	0.17	0.18	0.21	0.77
Implantation by France = Spanish law legacy = Others	0.00	0.07	0.03	0.00	0.01	0.00	0.00	0.94
Implantation by France x PD = Spanish law legacy x PD	0.21	0.53	0.17	0.65	0.54	0.94	0.99	0.52
Implantation by France x PD = Others x PD	0.53	0.08	0.04	0.75	0.72	0.99	0.82	0.18
Spanish law legacy x PD = Others x PD	0.62	0.28	0.87	0.80	0.80	0.94	0.87	0.43
Implantation by France x PD = Spanish law legacy x PD = Others x PD	0.40	0.21	0.09	0.89	0.81	1.00	0.97	0.36
Com-law x PD= Implantation by France x PD = Spanish law legacy x PD = Others x PD	0.01	0.10	0.00	0.02	0.03	0.10	0.08	0.02

NOTES: Dependent variable is stock market capitalization, which represents the total value of listed shares over GDP. Variable descriptions are provided in Appendix I. The sample contains non-European countries colonized by Western powers (Appendix II). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. At the bottom we show the p-values of the Wald tests of equality of coefficients. PD means population density.

UNPUBLISHED APPENDIX VII. TABLE 3

COMPARISON ACROSS CIVIL LAW GROUPS: PROTECTION OF PROPERTY RIGHTS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
- Common law (Ref. group)								
- Civil law:								
• Implantation by France	-26.23***	-14.297**	-26.947***	-25.744***	-21.449***	-21.796***	-20.9***	-21.289***
	(5.723)	(5.792)	(6.203)	(5.376)	(7.068)	(6.209)	(5.523)	(7.404)
• Spanish law legacy	-15.679***	-17.535***	-21.664***	-12.548	-17.986***	-14.123***	-10.523**	-22.695***
	(5.256)	(4.382)	(6.981)	(8.659)	(5.036)	(5.228)	(5.224)	(7.79)
• Others	-12.865**	-12.733***	-14.063**	-12.108**	-11.319**	-11.111**	-10.866**	-14.053***
	(5.064)	(4.563)	(5.295)	(4.762)	(4.763)	(5.063)	(4.447)	(5.192)
- Common law x Pop. dens.	-7.449***	-4.172***	-7.022***	-7.321***	-7.004***	-6.155***	-6.097***	-7.387***
	(1.492)	(1.343)	(1.556)	(1.551)	(1.441)	(1.699)	(1.645)	(1.285)
- Civil law x Pop. dens.:								
• Implantation by France x Pop. dens.	1.564	-1.937	2.56	1.566	-1.723	-1.297	0.457	0.223
	(2.629)	(2.805)	(3.583)	(2.642)	(3.622)	(2.864)	(2.564)	(3.603)
• Spanish law legacy x Pop. dens.	-4.103	-3.297	-3.82	-4.136	-2.673	-1.088	-2.292	-3.667
	(4.933)	(4.96)	(5.037)	(5.007)	(4.965)	(4.896)	(4.89)	(4.998)
• Others x Pop. dens.	-2.989	-0.924	-3.685	-3.155	-3.668*	-3.39*	-2.538	-1.509
	(2.102)	(2.192)	(2.512)	(1.994)	(1.947)	(1.895)	(1.86)	(2.373)
Ln GDP pc		7.462***						
		(1.567)						
Years since independence			0.05					
			(0.052)					
Religion (p-value)				[0.867]				
Ethnic fractionalization					-19.055**			
					(9.345)			
Latitude						38.777**		
						(15.45)		
Land in tropics							-7.84*	
							(4.223)	
Latin America and Caribbean								4.394
								(7.425)
Africa								-9.252**
								(4.486)
Constant	54.381***	-9.78	51.864***	61.804***	64.691***	46.241***	53.901***	57.782***
	(3.503)	(13.448)	(4.897)	(19.172)	(6.601)	(5.07)	(4.094)	(3.413)
R-squared	0.39	0.55	0.41	0.4	0.43	0.43	0.39	0.44
Number of observations	92	91	88	92	91	92	87	92
Wald tests								
Implantation by France = Spanish law legacy	0.08	0.62	0.58	0.17	0.65	0.18	0.08	0.89
Implantation by France = Others	0.02	0.82	0.06	0.03	0.15	0.08	0.06	0.39
Spanish law legacy = Others	0.60	0.37	0.31	0.96	0.19	0.55	0.94	0.22
Implantation by France = Spanish law legacy = Others	0.07	0.65	0.11	0.08	0.22	0.20	0.14	0.36
Implantation by France x PD = Spanish law legacy x PD	0.31	0.81	0.31	0.32	0.88	0.97	0.62	0.53
Implantation by France x PD = Others x PD	0.18	0.79	0.15	0.17	0.61	0.55	0.36	0.70
Spanish law legacy x PD = Others x PD	0.84	0.66	0.98	0.86	0.85	0.66	0.96	0.69
Implantation by France x PD = Spanish law legacy x PD = Others x PD	0.35	0.90	0.33	0.34	0.87	0.78	0.64	0.82
Com-law x PD= Implantation by France x PD = Spanish law legacy x PD = Others x PD	0.03	0.50	0.09	0.03	0.40	0.43	0.15	0.06

NOTES: Dependent variable is protection of property rights, which reflects the level of protection of property rights and ranges from 0 to 100, where higher values mean stronger protection. Variable descriptions are provided in Appendix I. The sample contains non-European countries colonized by Western powers (Appendix II). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. At the bottom we show the p-values of the Wald tests of equality of coefficients. PD means population density.

CHAPTER 3: THE DISTRIBUTION OF LEGAL TRADITIONS AROUND THE WORLD: A CONTRIBUTION TO THE LEGAL ORIGINS THEORY

The distribution of the common law was conditioned by a colonial strategy sensitive to the colonies' level of endowments, exhibiting a more effective implantation of the legal system in initially sparsely populated territories with a temperate climate. This translates into a negative relationship of precolonial population density and settler mortality with legal outcomes for common law countries. By contrast, the implantation of the French civil law was not systematically influenced by initial conditions, which is reflected in the lack of such a relationship for this legal family. The common law does not generally lead to superior legal outcomes to the French civil law when precolonial population density and/or settler mortality are high. The form of colonial rule in British colonies is found to mediate between precolonial endowments and postcolonial legal outcomes.

3.1. INTRODUCTION

Fifteen years of abundant research in the legal origins literature has established that legal traditions are strongly related to creditor and investor rights, efficiency and quality of legal systems, and economic regulation. The pioneering papers of La Porta et al. (1997, 1998) analyze the effect of legal traditions on the legal protection of corporate shareholders and creditors, finding that common law countries have stronger investor and creditor rights than civil law countries. Subsequent work has confirmed these initial results for a larger sample of countries, improved indicators of legal rules and over a wider time interval (La Porta, Lopez-de-Silanes, and Shleifer –hereafter LLS– 2006; Djankov, McLiesh and Shleifer 2007; Djankov et al. 2008b). Related research has shown that common law countries are associated with lower legal formalism, more efficiency of contract and debt enforcement, higher judicial independence and, in general, higher quality of legal systems (Djankov et al. 2003b; La Porta et al. 2004; Djankov et al. 2008a; Balas et al. 2009). All this literature advocates that the British

common law is associated with better rules and outcomes than the French civil law in many areas of the legal system.[32]

As a result of the unprecedented popularity gained by the Legal Origins Theory, a number of criticisms have been raised (among others, Rajan and Zingales 2003; Licht, Goldschmidt and Schwartz 2005; Roe 2006; Roe and Siegel 2009; and Spamann 2010b, c). Within the context of the present chapter, it is particularly relevant the point made by Berkowitz, Pistor, and Richard (2003a, b) who argue that the manner in which legal systems are obtained is more important than the specific countries' legal traditions to explain the quality of legal systems. They differentiate among origin countries, receptive transplants and unreceptive transplants, with the first two categories being related to higher legal effectiveness. Whether legal transplants are receptive or not depends on the adaptation of the imported law to local conditions and on the population's familiarity with law principles.

In parallel to the Legal Origins Theory, a growing body of research pioneered by the work of Engerman and Sokoloff (1997, 2000) and Acemoglu, Johnson, and Robinson –hereafter AJR– (2001, 2002) has developed. This strand of the literature, known as the endowments view, emphasizes that initial conditions existing in territories colonized by European powers were crucial in explaining institutional development in former colonies. Endowments such as the disease environment, indigenous population density or resources abundance determined the colonial strategy and created the incentives to establish different types of institutions. However, according to this view, legal traditions are not considered as decisive determinants of institutional development.

Some authors have combined the endowments view and the legal origins literature. Beck, Demirgüç-Kunt, and Levine (2003a) and Levine (2005b) provide empirical evidence showing that both legal traditions and initial endowments are important factors

[32] It has also been shown that governments in common law countries intervene and regulate to a lesser extent the economy (LLS 2002; Djankov et al. 2002; Botero et al. 2004). In addition, the common law appears superior to the French civil law in terms of financial development (La Porta et al. 1998; Beck, Demirgüç-Kunt, and Levine 2003a). This is explained by the lower judicial formalism and the greater ability for the common law to evolve as a response to changing circumstances (Beck, Demirgüç-Kunt, and Levine 2003b). See Beck and Levine (2005) and LLS (2008) for authoritative reviews of the legal origins literature.

to explain financial development and property rights protection. Acemoglu and Johnson (2005), in trying to distinguish between property rights and contracting institutions, find that endowments influence to a greater extent the former while legal origin has more impact on the latter. By borrowing ideas from the law and finance literature, the endowments view and the "transplant effect" hypothesis, Oto-Peralías and Romero-Ávila (2014) showed that the effect of the common law on financial development is conditioned by the level of initial endowments. Extensive evidence indicates that the common law has led to higher private credit and stock market capitalization only in sparsely populated territories at the arrival of Europeans, where this legal tradition could be effectively introduced by European practitioners. On the contrary, the effect of the French civil law on financial development is invariant to endowments. In that paper we anticipated that the likely mechanism responsible for the heterogeneity observed across legal traditions lies in the distinct response of European powers' colonial strategies to endowments, but we did not assess its empirical validity.

This chapter goes one step further and assesses thoroughly the mechanisms linking precolonial conditions and their interaction with legal traditions to postcolonial legal outcomes. In addition, this chapter differs from Oto-Peralías and Romero-Ávila (2014) in that, instead of analyzing the determinants of financial development, it brings additional insights into the core of the Legal Origins Theory that focuses on the relationship between legal traditions and legal rules and regulations by arguing that the process of distribution of legal traditions from origin countries to colonies is crucial to understand that relationship. Legal families were transferred from only few mother European countries to the rest of the world. An assumption made by the Legal Origins Theory is that the essential characteristics of each legal tradition remain both in origin and transplanted countries, and also implicitly that the implantation was homogeneous across countries within the same legal tradition.[33] By doing so, the literature so far groups countries together according to their legal traditions and analyzes how these legal families are related to different aspects of a country's legal system.

[33] Although Djankov et al. (2003a) note that the way law and institutions are transplanted matters and LLS (2008) recognize that not all countries received legal traditions through conquest or colonization (for example, Latin America), beyond this clarification these authors do not account for the peculiarities of the implantation process.

This chapter contributes to the Legal Origins Theory by showing that the relative legal rules and outcomes (in terms of creditor and investor rights, credit information, legal system efficiency and regulatory burden) of the British common law vs. the French civil law are associated with the colonial strategies followed by mother countries when implanting their legal systems in their colonial dominions. We argue that the distribution of legal traditions was highly heterogeneous, with initial endowments in colonized territories being the key factor explaining this diversity.[34] To illustrate this point, Figures 1 to 2 show how different the relationship of both investor protection and time to enforce contracts with precolonial population density is across common law and civil law colonies. In our view, this fact reflects the differentiated impact that the presence of native population had on the distribution of each legal tradition.

[34] Following the endowments view literature, we refer to endowments as those initial conditions in colonized territories that were crucial in accounting for the colonial strategies followed by European powers. Even though the body of the chapter uses precolonial population density (indicating the extent of indigenous labor abundance and precolonial prosperity) as the main endowment variable, one needs to conceive endowments in a broad sense, also considering other aspects such as the disease environment caused by the type of climate (tropical vs. temperate). Toward this end, we complement the analysis with the use of the potential mortality rate of European settlers, with the results being remarkably robust to the endowment indicator employed. Since the word *endowments* may evoke positive factors, for the sake of clarity, we henceforth employ the term "adverse endowments" instead of "high levels of endowments" to refer to either high precolonial population density or high potential settler mortality (as they are both generally associated with low European settlement and the predominance of extractive colonial strategies conducive to political and legal structures aimed to exploit indigenous resources, rather than build sound property rights (AJR 2001, 2002; Levine 2005). Likewise, we use the term "favorable endowments" instead of "low levels of endowments" to refer to either low precolonial population density or low potential settler mortality (as they are both conductive to more European settlement, which favored the transmission of legal systems and led to inclusive institutions).

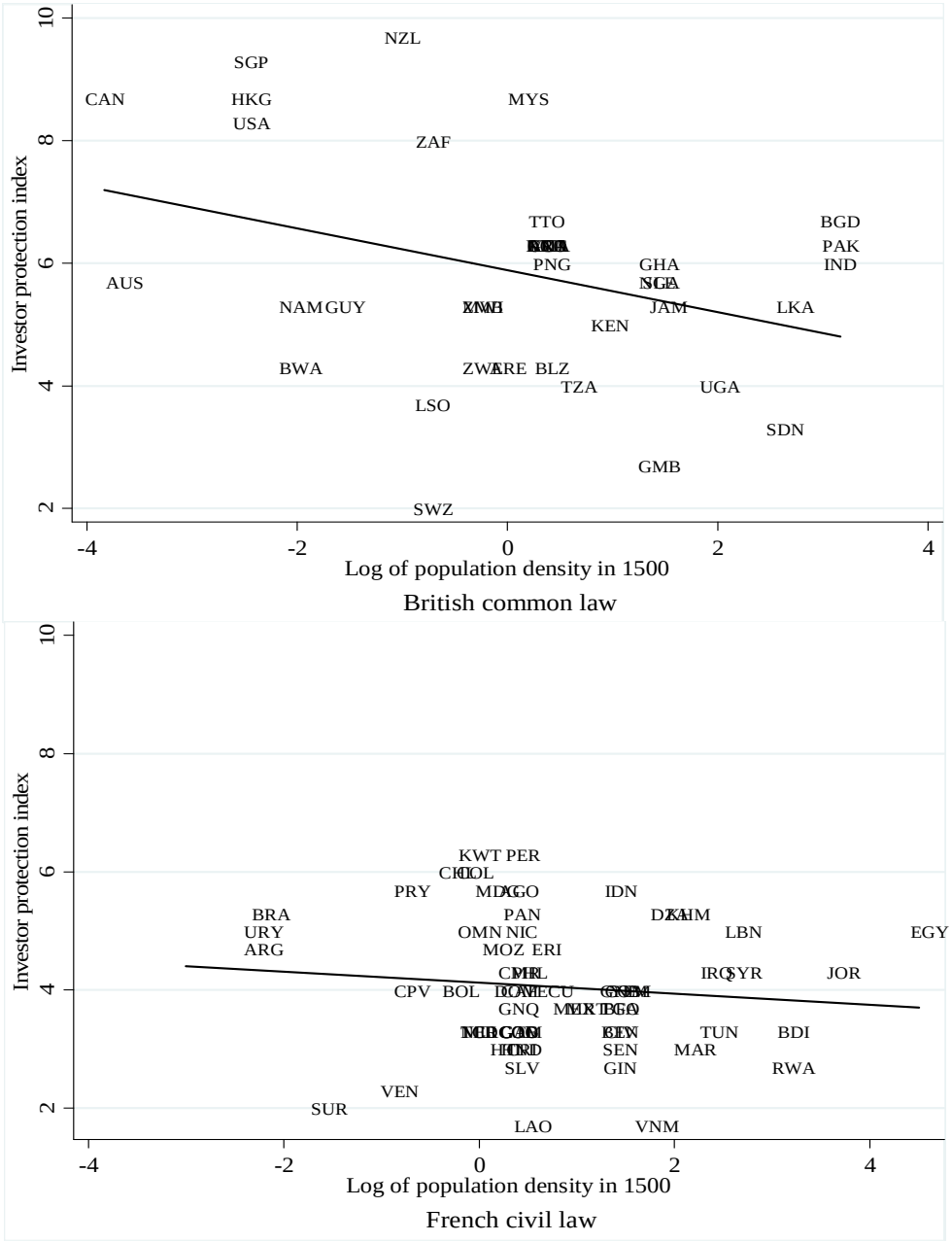


Figure 1. The Distribution of the British common law and the French civil law: Investor protection

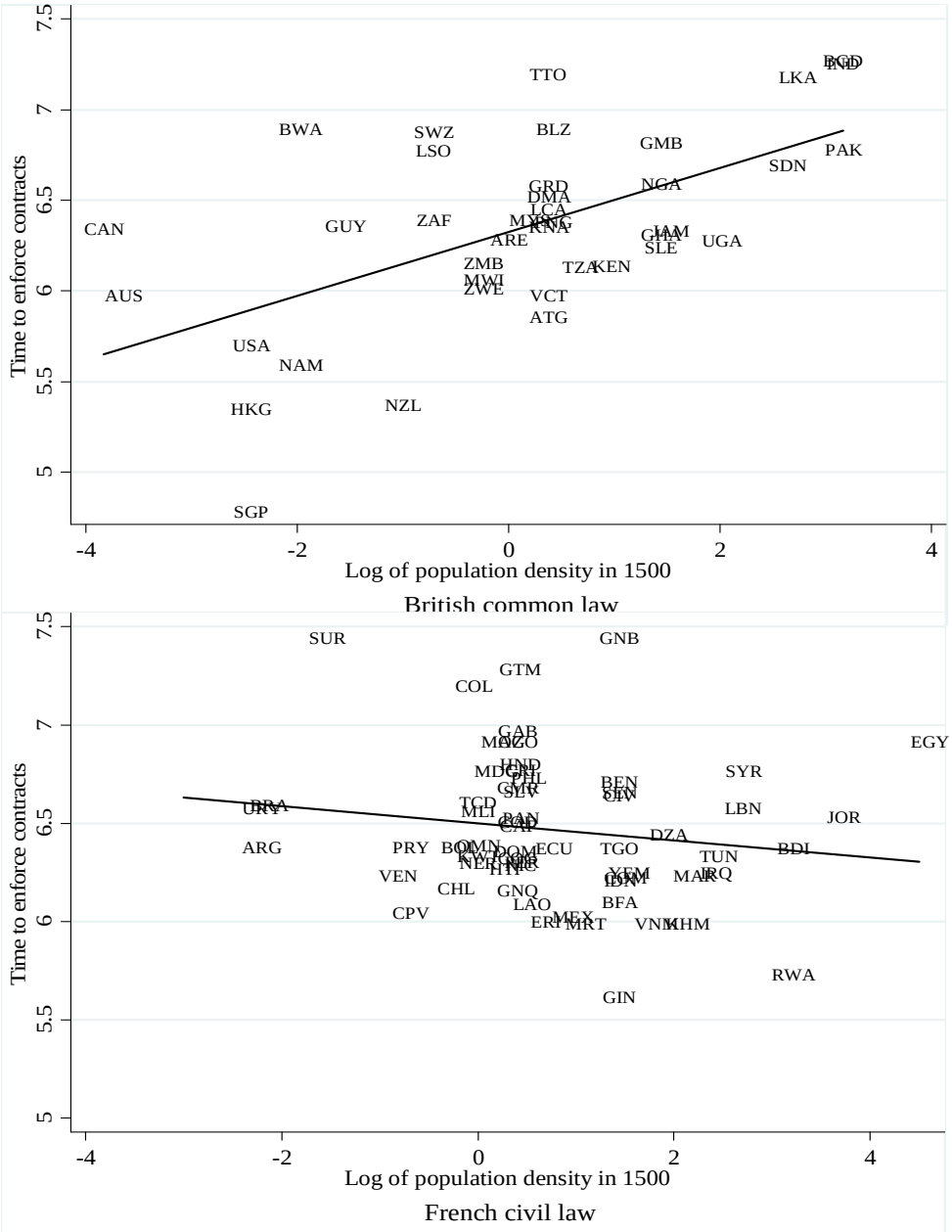


Figure 2. The Distribution of the British common law and the French civil law: Contract enforcement

On the one hand, the transplantation of the common law was inversely related to the level of population density at the time of colonization. This was due to the nature of British colonial policy, which did not want to interfere with preexisting native law and rules of indigenous societies (Zweigert and Kötz 1998; Glendon, Carozza, and Picker 2008). Thus, in sparsely populated territories with a temperate climate the common law was extensively transferred and, consequently, we observe the usual features associated

with this legal tradition, that is, high creditor and investor rights, effective legal systems and low regulation of the economy. In contrast, in those places with a large indigenous population and unfavorable disease conditions, few if any of these features are observed, since the legal and institutional transfer was very superficial and could even have negative consequences. This is because the widespread use of indirect rule in these colonies led to the empowerment of local elites who, unlike precolonial times, were no longer subject to traditional checks by the native population and could mold customary law, which was not formalized, in their own benefit (Daniels, Trebilcock, and Carson 2011; Lange 2004). In short, low precolonial population density and the likelihood of the British colonial power moving in are highly correlated so that in colonies where the conditions were ripe for the colonizers to live there, they adopted the common law. However, in those places where lots of people already lived or where it was hard for settlers to survive, the introduction of the common law either did not occur or, if it did, was too hard to enforce among the indigenous population.

On the other hand, France imposed its civil law rigidly across its empire, leading frequently to conflicts with existing laws. Since this colonial policy was largely independent of the particular circumstances of the colonized territories, the distribution of the French civil law across colonial dominions was more uniform than in the British case. In addition, as a related question to the distribution of the French civil law, we support the view that former Spanish colonies deserve separate treatment since they share a common Castilian law legacy and a different adoption of the Civil Code by imitation. Both characteristics warn against mixing these countries with those colonies where the French civil law was implanted by France itself. Former Spanish colonies experienced a better assimilation of the civil law and, therefore, one expects better legal outcomes for this group compared to French colonies.

Our empirical analysis provides extensive evidence supporting the thesis proposed in this chapter about the presence of heterogeneity in the distribution of legal traditions for a cross-section of 100 former colonies. An interaction model is used to explain a variety of legal rules/outcomes through legal traditions, indigenous population density and their interaction. We employ as dependent variables legal indicators such as creditor and investor rights, credit information sharing institutions, enforcement of debts and contracts and regulatory burden from *Doing Business* in addition to firm and household

survey-based legal outcomes. This not only enables us to cover the main dimensions of the law-making process and regulation previously studied by the legal origins literature, but also to extend the analysis through the use of a wide array of indicators measuring how firms and households perceive and experience the legal and regulatory systems. Our findings can be summarized as follows: 1) according to our thesis, for common law countries we find a consistent and robust negative relationship between endowments and legal outcomes; 2) in contrast, for the French civil law tradition we do not observe any clear-cut pattern between endowments and legal outcomes; 3) for many legal indicators the British common law does not lead to better legal outcomes than the French civil law at high levels of precolonial population density or potential settler mortality; 4) former colonies deriving their legal systems from Spain exhibit in general higher scores in legal variables than those obtaining the civil law from France itself; 5) the form of colonial rule in British colonies mediates between endowments and postcolonial legal outcomes.

The remainder of the chapter is organized as follows. Section 2 explains how the British common law and the French civil law were distributed around the world, thereby emphasizing the role played by endowments in that process. Section 3 describes the empirical approach and data used. Section 4 presents the basic regression evidence. Section 5 reports the results of the sensitivity analysis and those obtained with firm and household survey-based data on legal and regulatory outcomes. Section 6 explores the mechanism linking initial endowments and their interaction with legal traditions to current legal outcomes. Section 7 puts forward some implications and concludes.

3.2. HOW COLONIAL POWERS DISTRIBUTED THEIR LEGAL TRADITIONS

This section consists of four parts. Firstly, we make some general remarks about the importance of the distribution of legal traditions in the Legal Origins Theory. Secondly, we introduce the role played by endowments in the colonial strategies of mother countries when implanting their legal systems in the colonies. Finally, we describe how the British common law and the French civil law were distributed around the world.

3.2.1. On the Importance of the Distribution of Legal Traditions

It is not our intention here to repeat general issues concerning the Legal Origins Theory, which are well described in other papers (see Beck and Levine 2005; LLS

2008). Rather, our aim is to focus on the key aspect of the distribution of legal traditions which, despite its relevance, has not received much attention. We make four general comments about the importance of this process for the Legal Origins Theory. First, the vast majority of countries are "non-origin" countries, which means that the process of distribution of legal traditions is pivotal by itself and, consequently, almost all the evidence provided in the literature relies on differences among "non-origin" countries.[35] Second, it is argued that "legal traditions were typically introduced into various countries through conquest and colonization and, as such, were largely exogenous" (LLS 2008, p. 286). This highlights that only "non-origin" countries possibly allow us to make causal statements. Thus, much of what is written about the effect of legal origins is possible because this variable appears exogenous for most countries. Third, related to the preceding, colonialism is a phenomenon of great importance for the distribution of legal traditions, since it made it possible to spread European legal systems around the world. Thus, questions such as the initial conditions existing in colonized territories or the colonial strategies implemented by European powers are key factors to bear in mind when explaining such a distribution.

Fourth, it is generally assumed that countries belonging to each legal tradition received "specific laws and codes and the more general styles or ideologies of the legal system" in the transplantation process and, despite further legal evolution at the national level, "the basic transplanted elements have remained and persisted" (LLS 2008, p. 288). Most importantly, it has been implicitly assumed that the implantation process was homogeneous within legal traditions.[36] This explains why countries are simply grouped into four legal traditions (the British common law and the German,

[35] In fact, Glaeser and Shleifer (2002, p. 1221) state that "the empirical results described [regarding the Legal Origins Theory] are driven almost entirely by former colonies rather than by England and France". Thus, a basic ingredient of the Legal Origins Theory is –in words of LLS (2008, pp. 306-7)– that legal traditions "were transplanted by the origin countries to most of the world".

[36] Daniels, Trebilcock, and Carson (2011) agree on this point by arguing that one of the assumptions underlying the claim about the superior performance of the British common law is that transplanted institutions were imposed uniformly across territories; an assumption they clearly question. In addition, it is assumed that the transplantation of law entailed not just legal rules but also other organizational features of legal systems (Pistor 2009), which gives more room for the possibility of heterogeneity in the distribution process.

Scandinavian and French civil law) and why many legal features and outcomes are associated with these legal families abstractly, that is, without differentiating countries within them. In this section we describe how the distribution of the British common law and the French civil law was very different and the main implications resulting from that.

3.2.2. The Role Played by Endowments

To account for the process of transplantation from mother countries to "non-origin" countries is crucial to bring into the discussion the role played by endowments. According to Engerman and Sokoloff (1997, 2000) and AJR (2001, 2002), factors such as indigenous population density, resources abundance or tropical disease determined the colonial strategy of European powers and shaped the incentives to create different types of institutions. Adverse endowments in the form of high indigenous population density or high settler mortality rates are generally associated with low European settlement and the prevalence of extractive institutions. Following this literature, we argue that initial endowments also conditioned the strategy of implantation of metropolitans' legal systems in the colonies. Ross Levine (2005b), in fact, raises the possibility that legal traditions and endowments interact. He suspects that the negative effect of the French civil law could be particularly large in territories with adverse endowments. However, as we show below, it is not the effect of the French civil law that worsens with adverse endowments but that of the common law.

The core of our analysis is conducted with a particular measure of endowments, namely, precolonial population density. We motivate the choice of this variable as our preferred endowments indicator on the grounds that it was a key factor that conditioned colonial legal policies in several ways. First, the presence of high indigenous population density limited European settlements (Easterly and Levine 2012), which is an important factor for the type of legal-administrative institutions established in the colonies as well as for the transmission of legal expertise. Second, where Europeans found more prosperous and densely populated societies they had incentives to build coercive legal

systems to exploit indigenous resources.[37] Third, high precolonial population density can be associated with the preexistence of a society (or political entity more or less organized) with its own rules, following the Roman maxim "*Ubi Societas, Ibi Ius*". Importantly, the response of colonial powers to native rules is a decisive factor to explain the differences in the distribution of legal traditions across colonial empires. As pointed out below, Britain responded differently from France, trying to preserve indigenous rules to a greater extent (Zweigert and Kötz 1998; Glendon, Carozza, and Picker 2008).

Before turning to describe the pattern of distribution of the common law, we justify our focus on a sample of former colonies as the most appropriate way to analyze the issues at hand. It is due to two main reasons. First, the basis of our argument is the presence of heterogeneity in the way legal systems were transmitted from origin to "non-origin" countries. Within the second category, former colonies are the vast majority and represent the only group for which legal traditions are arguably exogenous. In Europe, for example, although Napoleon imposed its Code on the territories conquered by the French army, there have always been mutual legal influences throughout history. Thus, the rediscovery of Roman law (Justinian's Digest) in the northern Italy monasteries, along with the canon law from the Catholic Church, laid the foundation for the *ius commune* that prevailed in continental Europe since the Middle Ages. In contrast, the implantation of European legal traditions in the colonies constituted a radical change relative to their situation before being colonized. Consequently, by focusing on former colonies the exogeneity of legal origins is

[37] In the territories of the Aztec and Inca empires, Spain employed a system of coercive labor (the "*encomienda*") to exploit the abundant human resources. According to Acemoglu and Robinson (2012, Ch. 1), the key factor behind the different colonial strategies followed by Spain and England in the New World was the presence or not of native population that could be used as forced labor. The importance of precolonial population density in accounting for the colonial strategies and policies is reflected in its widespread use in the literature (see, among others, Fieldhouse 1966; Engerman and Sokoloff 2000; Mahoney 2003; Lange 2004; Lange, Mahoney, and vom Hau 2006; Bruhn and Gallego 2012).

stronger.[38] Second, we base our analysis on the role played by endowments in the distribution of legal traditions through conditioning the colonial strategies of European powers, which only holds for the group of former colonies.

3.2.3. The Distribution of the British Common Law

Comparative law scholars have documented well that the common law was exported in a heterogeneous way across the British colonial empire. Zweigert and Kötz (1998) differentiate two groups of colonies: the settler colonies, which at the time of colonization were "unoccupied or occupied only by natives at a very early stage of civilization and not yet politically organized" (p. 220); and the rest, which were colonies previously controlled by native kings or other European powers. In the first group Britain transplanted the common law mechanically, while in the second the legal policy did not aim to replace the existing native rules but to preserve them. Accordingly, in North American and Australasian colonies there was a deep transfer of the common law directly by European practitioners, whereas in African colonies "to much the largest part of the African population the Common Law is of almost no practical significance" (p. 230). On the same issue, Glendon, Carozza, and Picker (2008) point out that the former group of colonies was characterized by the absence of "civilized" local law and the presence of only a small indigenous population, whereas the latter comprised more densely populated territories which in many instances had well-established customary rules.[39]

[38] Michaels (2009) remarks that the "ingenious idea" of La Porta *et al*. (1997, 1998) to solve the endogeneity problem between legal rules and economic performance was "to look at settings in which law was not co-original with society but instead was imposed as an external factor", which they found "in the context of colonization, where law was […] imposed externally by the colonizing power, with a random distribution of different legal systems depending on which European country colonized parts of the non-European world." (p. 769).

[39] Daniels, Trebilcock, and Carson (2011) emphasize the high degree of variability in jurisdictional arrangements and institutions in the British Empire, which were responsive to the initial conditions encountered by colonizers, including the preexisting indigenous legal order. Outside of the settler colonies, territories under British control did not experience a complete transplantation of the common law and a subsequent displacement of native rules. In practice, the implantation process of the British law in each colony led to a unique corpus of law that differed from that in other colonies. Roe and Siegel (2009) also stress that Britain did not seek to uniformly transplant its own legal institutions to its colonies,

Behind this heterogeneity in the distribution of the common law is the fact that Britain opted for a "flexible" colonial administration system, which was variable to local conditions, featured a high degree of local autonomy and in many parts of the empire took the form of indirect rule (Fieldhouse 1966). "[It] was pragmatic in terms of the adaptation of British law" (Schmidhauser 1992, p. 323). Regarding this style of colonial government, Zweigert and Kötz (1998) point out that "English policy was different [than the French]: true to the principle of 'Indirect Rule', English colonial administrators relied as much as possible on existing native rules, kept the local courts decentralized, and left mature native law almost intact" (p. 113).[40] Lange (2004) argues that indirect rule strengthened the positions of traditional chiefs as customary law administrators, who molded and interpreted customary law in their own benefit, thereby leading to abuses of power. This further promoted the control of economic resources by local elites, imperfect protection of property rights, social instability and conflict over the exercise of power (Berry 1992; Mamdani 1996).[41]

The colonial experience of Nigeria gives a good account of the negative effects –intended or not– derived from the system of indirect rule. The British established a parallel jurisdictional model consisting of colonial courts that dealt only with matters

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since their widespread transfer would have been incompatible with ruling an empire. Thus, when Britain faced the occupation and control of Africa, it was clear the dangers that an "indiscriminate transfer of British legal practices" posed to colonial domination (Young 1988).

[40] Even though indirect rule was previously applied in some parts of India, Lord Lugard is known to be the colonial administrator that theorized it. In Lugard (1919, p. 298), he argues for "a single Government in which the native chiefs have well-defined duties and an acknowledged status equalling with the British officials" (see also Lugard, 1922). Thus, indirect rule was based on cooperation, rather than subordination as in the French case (Crowder 1964; Betts 1985). According to Lange (2004, p. 906), the most commonly view for indirect rule is that of Fisher (1991) who describes it as "the incorporation of indigenous institutions –not simply individuals– into an overall structure of colonial domination. From this view, direct rule differs from indirect rule in that it involves the construction of a complete system of colonial domination that lacks any relatively autonomous indigenous component, yet which might be staffed overwhelmingly by indigenous actors."

[41] Lange (2004) points out that the degree of indirect rule –that he measures as colonial dependence on customary courts– was related to local conditions such as the disease environment and precolonial population density. In Section 6 we implement an exercise in which endowments act as instruments for the extent of direct/indirect rule to explain current legal rules and outcomes.

involving Europeans and native courts that, under indigenous customs and rules, handled all disputes between non-Europeans. This dual court system for dispute resolution implied a minimal contact of most indigenous population with the common law and a high degree of inconsistencies and uncertainties in the legal system.[42] Another important feature of indirect rule was that native chiefs were granted legislative, executive and judicial powers in order to control social relations in their chiefdoms, thereby being accountable only to British officials (Lange 2004). Since these chiefs were no longer subject to traditional checks by the native population as in precolonial times, they undermined the historical legitimacy of the native court system as well as the effectiveness of their customary law. It was even worse in Southern Nigeria and Kenya where, in the absence of traditional indigenous rulers, the British opted for appointing local headmen as new leaders vested with authority over the native population (Daniels, Trebilcock, and Carson 2011).[43] Also related is the issue of "custom invention" by local chiefs that often gave rise to misleading "descriptions of the main features of the political system, customary law and land tenure" (Chilver 1963, p. 110). This enabled them to coerce the local population by controlling chiefdom police forces, customary courts and people's access to land (Lange 2009; Daniels, Trebilcock, and Carson 2011). According to Migdal (1988), Ben-Jua (1995), Mamdani (1996),

[42] This situation has persisted over the postcolonial era. As a matter of fact, in other indirectly ruled colonies such as Sierra Leone, Tanzania and Zambia, the English law that today forms the basis of the legal system remains alienating to most people. "Such law is not embedded in the customs and traditions of those societies; it is complex, technical and expensive to implement. For ordinary people it is inaccessible, often physically remote and in many cases conducted in a language they do not understand." (Robins 2009, p. 2).

[43] A contemporary at that time and firm supporter of indirect rule like Perham (1934a) explicitly admitted the difficulties colonial officers were facing in recognizing the true native authorities, which resulted in the appointment of many "wrong headmen" that really owed authority to their willingness to collaborate with colonial officials and had no claim to legitimacy on the basis of their lineage. Discussing the nature of indirect rule, Perham (1934b) also admitted that "[t]here is some truth in the complaint that it fails to preserve African societies and distorts their development in the attempt to adapt them. [...] Numerous examples can be quoted of attempts to turn African chieftainship with its peculiar attributes and its numerous limitations into an autocracy or, more often, a bureaucratic agency of the foreign power" (p. 327). On the consequences of the creation of "warrant" chiefs as a new political authority, see Crowder and Ikime (1970), Afigbo (1972, 1985), Wylie (1977) and Migdal (1988).

Herbst (2000) and Lange (2009), indirect rule set the stage for subsequent postcolonial collapse by institutionalizing despotism and contributing to the creation of neo-patrimonial states (where the traditional authority of chiefs to rule peripheral areas is captured by the central elites), thereby leading to an ineffective central administration unable to enforce law and order.

The high variability in the way the common law was exported to colonial societies had important consequences. In sparsely populated territories with a favorable disease environment the common law was extensively implanted and fitted well with the colonial society. This led to a more intense legal-institutional transfer, which made it possible to develop a legal system that is comparable in many respects to the British one. In these cases, the positive features associated with the common law are expected to prevail, and therefore, the legal system can provide good protection of investor and creditor rights as well as be efficient at enforcing private contracts and debts. By contrast, in places with a relatively large indigenous population and adverse disease conditions to European settlement, indirect rule generally prevailed, which led to the superficial application of the British law that barely influenced and even distorted previous legal practices based on customary law. Hence, the legal systems arising in such territories are not comparable to that of the origin country, which implies that they are unlikely to feature either a high degree of creditor and investor rights or efficient legal enforcement.

3.2.4. The Distribution of the French Civil Law

The distribution of the French civil law differs in several respects from that of the common law. An important aspect is that while it is clear that the common law was distributed by Britain across its empire via colonialism, the French civil law was exported in a number of ways. On the one hand, there is a group of former colonies that received the civil law by France itself, entailing those territories that belonged to the French colonial empire. On the other, most other colonies coded as French civil law received the Civil Code through third countries or by own initiative. Considering that each European colonial power applied a particular legal policy in its empire, it is important to differentiate among them to better understand how the French civil law was distributed around the world. Toward this end, we consider three categories of colonies according to the way the civil law was transmitted to the recipient country. The

first category includes those colonies that directly received the French civil law by France itself. This group contains 25 former French colonies in our sample. The second category consists of the former Spanish colonies (18 countries), whereas a third group comprises the remaining colonies (18 countries).[44]

3.2.4.1. Implantation by France Itself

France conducted a uniform and rigid application of the law across its empire and did not condition the implantation of the legal system on particular circumstances or endowments. Also, the application of the French law was more ambitious than in the British case and reached a higher percentage of people. Zweigert and Kötz (1998) state that "French colonial policy always sought in the long run to assimilate the native populations" (p. 113) and Whittlesey (1937) notes that "France is in Africa to make Frenchmen out of the Africans" (p. 367). The pursuit of legal assimilation led the French colonial legislation to encourage the native population to adopt the French law. While Britain applied the common law more flexibly and did not try to replace local laws and indigenous customs, France imposed its Code rigidly despite conflicting with local customs (Beck, Demirgüç-Kunt, and Levine 2003a). In fact, this homogeneity in the application of the law was accompanied by a similar administrative organization imposed on territories, which were considered uniformly even when they presented special features (Crowder 1964).

This legal colonial policy was coherent with the nature and character of the French empire, which was more centralized than the British and ruled with a very different ideology, namely, the consideration of the colonial empire as an intrinsic part of the Republic and the ideal of assimilation (Fieldhouse 1966; Kumar 2006). Referring to former French colonies, Whittlesey (1937) notes that they "represent an extension of France not merely economically, but in every phase of life" (p. 370). The French empire was based on centralized bureaucratic control of colonial dominions and relied more on direct rule. Besides, it had clear formal rules and chains of command, and indigenous chiefs were not considered an autonomous part in the system of colonial control

[44] Focusing on a different research question (the role of the colonizer vs. the legal family), Klerman et al. (2011) divide the French civil law tradition into two groups (French colonies and the rest) and find that former French colonies grew slower than the other French civil law colonies during the period 1960–2007.

(Crowder 1964; Gann and Duignan 1967). In ideological terms, the French, "inspired by egalitarian ideals of the Great Revolution and a belief in the superiority of 'civilisation française', constantly strove to lead the native population step by step to the higher level of metropolitan culture" (Zweigert and Kötz 1998, p. 113). All these features led to a more homogeneous colonial policy which was largely invariant to the level of endowments. [45]

The uniformity in the exportation of the civil law to former colonies had as a consequence a more homogeneous influence of the French civil law on colonial legal systems. Thus, the typically negative outcomes associated with the French legal tradition –as held by the Legal Origins Theory–, such as lower creditor and investor rights, higher legal formalism and lower legal efficiency, are likely to apply to all former French colonies irrespective of their initial endowments. We must add that the rigid implantation of the French civil law produced widespread unreceptive transplants –as reflected in the coding of the legal transplant variable by Berkowitz, Pistor, and Richard (2003a, b)–, which can also help explain the generally negative effect found for this legal tradition. In this respect, it is important to stress that the French civil law has had worse consequences in the colonies than in the origin country. This is because, despite the fact that soon after the revolutionary period France relaxed the strict application of the separation of powers and courts were granted the power to interpret laws, when exporting their legal system the French did "not include the information

[45] The different colonial strategies of France and Britain are reflected in the unequal presence of colonial officials in the colonies. For instance, this presence was much larger in French West Africa than in British Nigeria. In the 1930s, the ratio of colonial officials per thousand population was 24/100 for the former while 7/100 for the latter (Kirk-Greene 1980). In this sense, Whittlesey (1937) stated that "[t]he proportion of functionaries is therefore much higher in the French possessions [than in the British]. Obviously more political officers are needed for direct than for indirect government." (pp. 367-8). In addition, the status and power of the chiefs also differ. According to the Governor-General of French West Africa, Joost van Vollenhoven (1920), under French rule the chiefs "have no power of their own, for there are not two authorities in the *cercle* [the district]...; there is only one! Only the *commandant du cercle* commands; only he is responsible. The native chief is but an instrument, an auxiliary" (p. 207). In contrast to the British system of indirect rule stood "the French which tended to erode African authority, finally making the administrator the responsible judicial official" (Betts 1985, p. 324).

[saying] that it really does not work that way" (Merryman 1996, p. 116). This inhibited the development of the judicial system in many developing countries.[46]

3.2.4.2. Spanish Law Legacy

In line with French colonization, Spain eliminated indigenous legal systems in the Spanish American dominions (Fieldhouse 1966; Hanke 1949). However, there are two main distinctive features that qualify Spanish American colonies for separate categorization: the enduring legacy of the Spanish law tradition and the reception of the French Civil Code by imitation.[47] Before gaining independence, Spanish American colonies were ruled by Castilian kings over three centuries, period over which they were subject to a continuous process of reception of the Spanish law.[48] Initially after conquest, Spain transplanted Castilian laws to the colonies, but over time a special legislation was successively developed, which was compiled in the *Recopilación de las Indias*, a collection of 6,000 statutes published by Charles II in 1680 that were applicable to all the American colonies (Gacto, Alejandre, and García 2003).

[46] Note that this constitutes another example of the problems arising when mixing origin countries with colonies. An argument with similar implications is the one provided by Glaeser and Shleifer (2002), who state that for countries that choose their legal rules –like France– the civil law system may be efficient. However, when this legal tradition is introduced into the colonies significant problems probably arise, due to higher government control over judges and legal rules. Djankov et al. (2003a) also argue that the civil law is more problematic in the colonies than in France.

[47] An additional distinctive feature that differentiates these countries from the other French civil law countries is their mixed influences, because legislators have increasingly incorporated –particularly over the twentieth century– other legal sources such as the American, German, Italian or Swiss law (for example, Zweigert and Kötz 1998; Garro 1992; Roe and Siegel 2009). Also, a key characteristic of Spanish colonial domination of overseas colonies entailed the legal imposition of the Roman Catholic doctrine and forced conversions or punishment of non-Catholics (Fieldhouse 1966; Burns 1973; Schmidhauser 1992).

[48] It is well-known the fact that the Spanish law tradition is singular in the sense that it has its own history and idiosyncratic features. For instance, Hamilton (1917) stated that the "Spanish Civil Law is the most influential body of law on the globe today [...] It is no copy of the Code Napoleon, although that was carefully consulted". Its singularity comes from the Spanish history and one can find on it "a Roman foundation, Gothic, Moslem, local and maritime elements" (p. 317). Brown (1956) places the Spanish law system in a middle point between the English doctrine of precedent and the French position.

When the Spanish American colonies achieved their independence at the beginning of the nineteenth century, the Spanish law was the basis of their legal systems. In this sense, William W. Howe (1903) emphasized the key relevance of the Spanish law for Central and South America, since all these countries derived their system of law and jurisprudence from Spain.[49] The influence of the Spanish law in the American colonies provided a background of *ius commune* that facilitated the reception of the French Civil Code and other European sources. Many traditional concepts and ideas of the Civil Code, especially those coming from Roman law, constituted no breach with the legal institutions established in Latin America. Therefore, the shared Roman roots of the Spanish and French legal traditions favored the reception of the Civil Code (Zweigert and Kötz 1998; Garro 1992; Mirow 2004).

The second feature shared by former Spanish American colonies is the specific way in which the French civil law was received. These territories achieved their independence before Spain adopted a French oriented code. Thus, they received the French civil law by imitation, that is, through voluntary transplant, which increases the chances of receptivity by allowing the adaptation of foreign law to national circumstances (Berkowitz, Pistor, and Richard 2003a). The civil codes of Argentina and Chile exemplify the adaptation of foreign law to local conditions and were taken as referential legal sources by many other Latin American countries (Mirow 2001; Zweigert and Kötz 1998).[50]

[49] According to Mirow (2001), the study of the Castilian law *Las Siete Partidas* was used, for example, together with the French Civil Code, in the drafting of the prestigious Chilean Civil Code. Dam (2006) also emphasizes the importance of Spanish elements existing in Latin American law. Along similar lines, Peter J. Hamilton (1917) stressed that the Spanish law continues to control the civil relations of Central and South American countries. He pointed out that the *Recopilación de las Indias* still has great value for American countries and even compares the legacy of Spain in Latin America with that of Rome in Europe.

[50] Hence, the French civil law was not introduced (adopted) exogenously within this group of colonies, which is a point that merits special consideration and further justifies its categorization as a separate group. Nevertheless, it is important to note that Spain did impose its Roman oriented law on these countries. Therefore, in a broad sense the civil law itself is exogenous to former Spanish American colonies.

For all these reasons, it is clear that the reception of the French civil law in Spanish America differed markedly from that in other regions such as West and Central Africa. The substance of the law is also different because in the latter legal systems are impregnated with African and tribal customs, whereas in the former with the Spanish legal culture. Therefore, legal systems in countries that belonged to the Spanish empire are arguably more developed and effective than those of former French colonies. Regarding the influence of endowments on the implantation of the law, Spain –like France– applied legal rules homogeneously and in a centralized way across its empire. This led to a uniform introduction of the Spanish-Roman oriented law and created similar conditions among the colonies for the reception of the French Civil Code, which implies a constant effect of the Spanish law legacy irrespective of initial endowments.

3.2.4.3. Others

We create a third group that entails those territories that were colonies of countries other than France and Spain. This is a heterogeneous group of French civil law countries that comprises territories as diverse as the British mandates of the League of Nations for the Middle East, the Portuguese colonies or the Belgian, Dutch and Italian colonies. Given the small number of observations in each sub-category, bringing together colonies of such diverse origin into a residual group, though not ideal, may be the best available option. In addition, by creating this residual group we do not mix these countries with former French and Spanish colonies, which allows for a clearer analysis of the distribution of the civil law in both groups. Regarding the distribution of the law in this third group, we lack an appropriate theory accounting for the way each of these colonial powers implanted their legal systems. Since there is nothing indicating that the implantation of the law by these countries followed a systematic pattern, we expect no specific relationship between the distribution of the civil law and initial endowments.

Finally, after reviewing how legal traditions were spread around the world in the colonization process, one can still wonder about the ultimate cause of the different colonial legal policies followed by European countries. In particular, why did Britain but not France pursue a more sensitive policy to the presence of indigenous population and native rules? Colonial policies were congruent with the general character of the French and British empires, the former being more centralized and uniform and the

latter more decentralized and variable to local conditions (Fieldhouse 1966). However, the question that remains unanswered is why these empires differ. A plausible answer lies in the specific domestic conditions prevailing in each country. The centralist state tradition, the ideological heritage of the Great Revolution, their taste for homogeneity and rationalization were all reflected in the nature of the French colonial empire (Whittlesey 1937). In the case of Britain, their conservatism and preference for gradual changes, their liberalism and a higher economic motivation led to a more pragmatic and variable colonial empire (Fieldhouse 1973). Therefore, French and British imperialism needs to be related to their domestic history (Kumar 2006).[51]

3.3. EMPIRICAL APPROACH AND DATA ISSUES

In order to analyze the patterns of distribution of the British common law and the French civil law we estimate cross-section regressions for a sample of 100 former colonies. An interaction model is used to allow for the possibility of heterogeneity in the relationship between endowments and legal outcomes across legal traditions.[52] The French civil law group is divided into three categories depending on the way the Civil Code was received. Thus, the model to be estimated is as follows:

$$Legal\_outcomes_i = \alpha + \beta_1 \cdot implantation\_France_i + \beta_2 \cdot Spanish\_law_i + \beta_3 \cdot Others_i + \beta_4 \cdot common\_law \times endow_i + \beta_5 \cdot implantation\_France \times endow_i + \beta_6 \cdot Spanish\_law \times endow_i + \beta_7 \cdot Others \times endow_i + \varepsilon_i \quad (1)$$

where *legal_outcomes* represents the specific indicator of legal outcomes; α is the constant term; *implantation_France, Spanish_law* and *Others* are dummy variables capturing the civil law categories 'Implantation by France', 'Spanish law legacy' and 'Others' (taking the British common law as the reference group, reflected in the constant term); $common\_law \times endow$, $implantation\_France \times endow$, $Spanish\_law \times endow$, and $Others \times endow$ represent the respective interaction

[51] For an elaboration and empirical testing of these arguments, see Oto-Peralías and Romero-Ávila (2013).

[52] Other authors studying the influence of legal origin and endowments on institutions and financial development use linear models, which render constant effects for legal traditions (Beck, Demirgüç-Kunt, and Levine 2003a; Levine 2005; Acemoglu and Johnson 2005).

terms of the common law and civil law groups with the endowments indicator; and ε_i is the error term. Equation (1) is estimated via Ordinary Least Squares (OLS) with heteroscedasticity-consistent standard errors.

This model allows us to test four predictions derived directly from the discussion in the previous section about the distribution of legal traditions. First, the implantation of the common law was unequal among British colonies, with the transfer of legal rules and institutions being inversely related to the presence of native population. Therefore, we expect to find a statistically significant and negative coefficient on the interaction term $common\_law \times endow$ (or positive when higher scores in the legal variable imply worse outcomes). Second, the uniform implantation of the civil law by France in its colonies must be associated with a constant effect by the 'Implantation by France' group, that is, the absence of a systematic relationship between endowments and legal outcomes. Regarding the two other French civil law groups, particularly the 'Spanish law legacy' group, for the reasons given above we also expect a constant effect on legal outcomes.

Third, the model also enables us to test the relative performance of the common law vs. the French civil law categories at different levels of endowments. This can be done by comparing the predicted values of legal outcomes for each legal tradition both at low and high levels of precolonial population density. Since the implantation of the common law was more effective in sparsely populated territories, we expect differences between this legal family and the French civil law categories to be larger at low levels of precolonial population density. Fourth, confronting the coefficients on the dummy variables *implantation_France* and *Spanish_law*, we can test whether –according to our view– 'Spanish law legacy' is associated with better legal outcomes than the 'Implantation by France' group.

Concerning the selection of dependent variables, we rely on the *Doing Business* Project (2012) dataset for the legal and regulatory indicators. This dataset is built following the methodology developed in their papers by such prominent authors as Djankov, La Porta, Lopez-de-Silanes, Shleifer, Vishny and others. A very important advantage of using this source versus the original papers' data is the much wider coverage of countries, feature that is central given our focus only on former colonies. Further advantages are the update of the dataset and enhanced coverage in terms of

indicators in addition to improvements to the methodology and the correction of coding errors and inconsistencies in the data. *Doing Business* provides indicators on eleven different topics of business regulations. In order to proceed with the selection of indicators, we consider three important dimensions of legal rules/outcomes that have been intensively studied in the legal origins literature: a) *creditor and investor rights and disclosure*, b) *legal system efficiency*, and c) *regulation*. From each dimension, we select the most relevant or comprehensive indicators available.

Regarding the first dimension, we select the indicator "Strength of legal rights index", denoted by *creditor rights*, which measures the extent to which collateral and bankruptcy laws protect borrowers and lenders' rights. Another important indicator considered is "Strength of investor protection index" (hereafter *investor protection*), which assesses the strength of minority shareholder protection against directors' misuse of corporate assets for personal gain and self-dealing in related-party transactions. Both indicators range from 0 to 10, with higher scores implying better designed laws to expand access to credit as well as to protect investors. They are clear examples of "law on the books" indicators. The third indicator within this dimension is "Depth of credit information index" (hereafter *information sharing*) that measures –on a scale from 0 to 6– rules and practices affecting the scope, coverage and accessibility of credit information either through a public credit registry or a private credit bureau, with higher values reflecting more information available.

Concerning the second dimension, we select two legal outcome indicators. First, "time required to complete procedures" (henceforth *contract enforcement*) indicates the time (in days) to resolve a commercial sale dispute through the courts. According to Djankov, McLiesh, and Shleifer (2007), this indicator can be considered as an objective measure of efficiency of contract enforcement by courts. Second, "recovery rate" measures the present value of debt recovered by creditors in insolvency proceedings, after deducting the official costs of the proceedings and the loss of value due to assets depreciation. This variable can be considered as a measure of efficiency of debt enforcement. Regarding the third dimension, the regulatory indicators selected are

"number of days required to register a firm" (henceforth *starting a business*) and "number of days required to register property" (hereafter *registering a property*).[53]

The independent variables are the legal origin dummies and the endowments indicator. Our sample of former colonies contains only countries with the British common law and the French civil law.[54] We obtain these variables from La Porta et al. (1999), who identify the legal origin of the Company Law or Commercial Code in each country. Regarding the measure of endowments, our preferred choice is the logarithm of population density in 1500 (also referred to as precolonial or indigenous population density) from AJR (2002). As argued in Section 2, this was an important factor that influenced the colonial strategies of European powers when transferring their legal rules and institutions to colonized territories. Another advantage of indigenous population density over other alternatives is its availability for a larger cross-section of countries.[55] We refer the reader to Table A1 in the Appendix for descriptions and sources of the rest of the variables. Table A2 in the Appendix contains the list of former colonies categorized by legal traditions.

[53] The year of measurement is 2006, the first for which data are available for all selected variables. As pointed out below, the results are robust to employing legal outcomes data for the year 2010 or an average over the period 2006-2010. Logarithmic transformation is applied to indicators measured in days in order to reduce the high variability in the data. In the absence of a comprehensive indicator that measures the different aspects of a dimension by aggregating other indicators (for example, creditor rights), we prefer indicators measuring the duration of procedures since this is a fundamental feature of legal and judicial systems, which is reflected in the principle "justice delayed is justice denied". Thus, for instance, Djankov et al. (2008a) use days to enforce a contract as a measure of the quality of the legal system. In addition, Spamann (2010c) argues that measures of complexity, such as the number of steps, have an unclear meaning because they combine and uniformly weight disparate steps that differ greatly in importance and length.

[54] There are no colonies with the German and Scandinavian civil law families (LLS 2008).

[55] Potential settler mortality rate, from AJR (2001), is another well-known indicator, but it implies a significant reduction in the sample. In addition, it may be argued that due to the widespread use of quinine after 1850, tropical disease declined in importance as an obstacle to European settlements (Olsson 2009), which means that settler mortality may be less relevant for the imperialist wave of colonization. Notwithstanding, as pointed out below, the main results obtained for precolonial population density hold when it is replaced by potential settler mortality.

3.4. REGRESSION ANALYSIS: BASIC RESULTS

Table 1 presents the basic results for the seven dependent variables. The first three columns contain the variables related to *creditor and investor rights and disclosure*. Regarding creditor rights and investor protection we observe that the civil law dummies exhibit negative and highly significant coefficients, with the coefficient on 'Implantation by France' being larger in absolute value. In addition, the coefficient on the interaction between the common law and precolonial population density is negative and statistically significant at the 5% level or better, whereas the coefficients on the interaction terms for 'Implantation by France' and 'Spanish law legacy' are insignificant. This result supports our prediction about heterogeneity in the effect of the common law, since this legal tradition leads to higher creditor and investor rights protection in sparsely populated territories than in densely populated places. In contrast, for 'Implantation by France' and 'Spanish law legacy' creditor and investor rights do not vary significantly with the level of endowments. The third group within the French civil law tradition ('Others') shows an inconsistent coefficient on the interaction term, which appears negative and significant when the dependent variable is creditor rights but insignificant for the case of investor protection. In the bottom part of the table, we show the differences in predicted values between each civil law group and the common law for a relatively high value of precolonial population density (a value of 10 that represents the 87th percentile of the distribution). Comparing this information with the coefficients on the civil law dummies, which stand for the differences with respect to the common law when the log of population density is 0,[56] we can observe that differences between the common law and the civil law groups are substantially larger at low levels of population density than at high levels.[57]

[56] This corresponds to a value of precolonial population density of 1, which represents the 25th percentile of the distribution.

[57] According to equation (1), predicted values for the common law are calculated as: $\alpha + \beta_4 \times \ln(10)$. Concerning the civil law groups, predicted values for 'Implantation by France' are obtained as: $\alpha + \beta_1 + \beta_5 \times \ln(10)$, proceeding accordingly for the two other civil law groups. The comparison of the coefficients on the civil law dummies with those presented in the bottom part of the table reflects what happens to the relative scores in legal rules/outcomes between civil law groups and the common law when increasing log precolonial population density by 1.48 standard deviations (that is, (2.3–0)/1.55, where 1.55 is the standard deviation of the log of population density).

Column 3 reports the results for information sharing. In this case, the coefficient on the 'Implantation by France' dummy is only marginally significant, whereas the coefficient on 'Spanish law legacy' is positive and highly significant. Regarding the interaction terms, only for common law countries do we observe a negative and significant relationship between endowments and information sharing, which again gives support to our thesis about the presence of heterogeneity in the distribution of legal traditions. Comparing the coefficient on the 'Implantation by France' dummy (–0.82) with the one provided at the bottom part of the table (0.8), we observe that the common law is associated with higher information sharing than this civil law category at a low level of population density, but the situation is reversed at a high level of indigenous population density –though the difference is not statistically significant in this case. Regarding the relative effect of the common law vs. 'Spanish law legacy', significantly better outcomes are observed in the latter both at low and high levels of population density. This evidence on the favorable effect of 'Spanish law legacy' on promoting information sharing complements the results by Djankov, McLiesh, and Shleifer (2007), who find a positive impact of the French civil law on the presence of public credit registries.[58]

Legal outcomes related to *legal system efficiency* are introduced in columns 4 and 5. As far as contract enforcement is concerned, we observe that the civil law dummies are

[58] The better performance of 'Spanish law legacy' in information sharing is well reflected in a substantially higher average value (4.9) with respect to 'Implantation by France' (1.2), the other French civil law group (1.6) and common law countries (1.5). Given the different roles that legal traditions assign to government, we analyzed separately the variables "public registry coverage" and "private bureau coverage". We found that 'Spanish law legacy' has much higher public registry coverage than the other legal traditions, whereas there are no significant differences in private registry coverage. However, former French colonies appear to exhibit significantly lower private registry coverage than the British, but no statistical differences exist in terms of public registry coverage. Therefore, the common perception that civil law colonies exhibit significantly better public registry coverage vis-a-vis common law colonies appears to be driven by the high coverage in former Spanish colonies. Besides, the common law interacts negatively with precolonial population density only for the private credit bureau coverage, whereas the coefficient on the respective interaction term is found insignificant for public credit registry. The reason for this is that there are only three British common law colonies with a public credit registry (two of which have a score on the variable close to zero). These results are not reported to conserve space, but they are available in the unpublished appendix accompanying this chapter.

positive but statistically insignificant (except for the group 'Others'), thus indicating the absence of significant differences between the common law and the 'Implantation by France' and 'Spanish law legacy' groups at low levels of precolonial population density. The interaction term is positive and highly significant for the common law and insignificant for the civil law groups. This result reflects that, for common law countries, the higher the level of precolonial population density the longer the interval of time required to enforce contracts through the courts and, therefore, the lower the efficiency of the legal system. In the bottom part of the table, the negative signs reflect that contract enforcement is faster in the civil law groups than in the common law at high levels of population density, though the differences are significant only for 'Implantation by France'. Regarding the other indicator of *legal system efficiency*, namely recovery rate, the civil law dummies are negative and significant, with a notably smaller coefficient for 'Spanish law legacy'. The coefficient on the interaction between the common law and indigenous population density is negative and significant, which implies that this legal tradition leads to lower legal system efficiency where precolonial population density was higher. In this case, the interaction term for 'Implantation by France' is positive and significant, whereas for the other civil law groups the coefficients remain insignificant. Again, in the bottom part of the table we observe that the common law is not associated with higher legal system efficiency than the civil law tradition at high levels of precolonial population density (rather the opposite, though the differences are statistically insignificant).

Finally, columns 6 and 7 use as dependent variables two indicators related to *regulations*: starting a business and registering a property. The results appear in line with those in previous columns. More specifically, the coefficient on the interaction between the common law and population density is positive and significant, which means that the regulatory burden is positively related to the level of precolonial population density in this legal tradition. 'Implantation by France' and 'Spanish law legacy' exhibit insignificant coefficients on the interaction terms, whereas the group 'Others' presents a coefficient which is significantly negative for starting a business but positive and insignificant for registering a property. Concerning the differences in predicted values between the common law and the French civil law categories, the regulatory burden is significantly lower for the former at a low level of indigenous population density, since the significantly positive coefficient on the civil law dummies

reflects that common law countries spend less time completing the formalities required to start a business and register a property. In contrast, at a high level of population density the common law is not associated with less burdensome regulation than the French civil law groups.

The size of the coefficients suggest that precolonial population density exerts a remarkable effect on legal rules/outcomes among common law countries. For instance, India has a high level of precolonial population density of 3.165 (≈ ln(23.7)) and an intermediate score of creditor rights of 6. The coefficient on the interaction term in Table 1 indicates that if India had a population density closer to that of Australia –3.65 (≈ ln(0.026)), then India would exhibit one and half times its current score of creditor rights. Concerning contract enforcement, the same exercise would imply a substantial increase in the efficiency of the Indian legal system by reducing the time to enforce a contract in approximately 1,000 days, thus rendering a score close to Australia that entails 395 days.[59]

[59] More specifically, Δ(creditor rights) = –0.438*Δ(precolonial population density). India's population density equals 3.17 and Australia's –3.65. Then, Δ(creditor rights) = –0.438*(–6.82)= 2.99. As India's creditor rights equals 6, the new score would be 8.99. As regards contract enforcement, Δ(contract enforcement) = 0.176*Δ(precolonial population density) = 0.176*(–6.82)= –1.2. Since India's log of number of days to enforce a contract equals 7.26 (≈ln(1420)), its new level would be 6.06 (≈ln(428)), which implies a reduction of almost 1,000 days.

Table 1

Main Regressions

Dependent variable	Creditor and investor rigths and disclosure			Legal system efficiency		Regulations	
	Creditor rights	Investor protection	Information sharing	Contract enforcement	Recovery rate	Starting a business	Registering a property
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
- Common law (Ref. group)							
- Civil law groups:							
• Implantation by France	-4.370***	-2.515***	-0.824*	0.142	-34.981***	0.832***	0.864**
	(0.35)	(0.43)	(0.42)	(0.12)	(4.51)	(0.26)	(0.35)
• Spanish law legacy	-3.779***	-1.582***	2.944***	0.171	-12.061**	0.754***	0.071
	(0.43)	(0.40)	(0.40)	(0.11)	(5.33)	(0.19)	(0.20)
• Others	-4.051***	-1.458***	0.117	0.265*	-28.960***	1.387***	0.450
	(0.37)	(0.46)	(0.59)	(0.15)	(4.91)	(0.29)	(0.28)
- Common law x Pop. dens.	-0.438***	-0.341**	-0.632***	0.176***	-7.411***	0.224**	0.314***
	(0.15)	(0.16)	(0.18)	(0.05)	(2.02)	(0.10)	(0.09)
- Civil law groups x Pop. dens.:							
• Implantation by France x Pop. dens.	-0.112	0.209	0.075	-0.064	9.552***	-0.254	-0.202
	(0.25)	(0.23)	(0.29)	(0.07)	(2.62)	(0.16)	(0.19)
• Spanish law legacy x Pop. dens.	0.191	-0.277	-0.225	0.015	0.199	0.088	-0.082
	(0.29)	(0.20)	(0.21)	(0.06)	(3.95)	(0.11)	(0.09)
• Others x Pop. dens.	-0.269**	-0.056	-0.200	-0.051	1.132	-0.384***	0.065
	(0.11)	(0.17)	(0.22)	(0.07)	(1.26)	(010)	(0.13)
Constant	7.343***	5.886***	1.934***	6.326***	38.137***	3.246***	3.754***
	(0.29)	(0.28)	(0.32)	(0.08)	(3.60)	(0.15)	(0.15)
R^2	0.72	0.37	0.50	0.23	0.43	0.36	0.23
Number of observations	100	100	100	100	100	100	100
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)							
Imp. by France - Common law	-3.6[a]	-1.2[a]	0.8	-0.4[a]	4.1	-0.3	-0.3
Spanish law leg.- Common law	-2.3[a]	-1.4[a]	3.9[a]	-0.2	5.5	0.4	-0.8[a]
Others - Common law	-3.7[a]	-0.8	1.1	-0.3	-9.3	0.0	-0.1

Note. This table presents results from estimating equation (1) for the seven dependent variables. The description of variables is provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of the table we show the differences in predicted values between the common law and each civil law category when pre-colonial population density is equal to 10 (log=2.3). [a] means that differences are significant at the 95% confidence level.

In sum, Table 1 reveals four interesting results. First, the effect of the common law on legal rules and outcomes is inversely related to the level of endowments. Second, there is no clear-cut relationship between endowments and legal outcomes for the civil law groups. Third, common law countries perform better than French civil law countries at low levels of population density, whereas differences become smaller and in most cases statistically insignificant at high levels of population density. Fourth, 'Spanish law legacy' exhibits generally better legal outcomes than 'Implantation by France', as

becomes apparent when comparing the coefficients on the dummy variables.[60] Thus, these results support our view regarding the presence of heterogeneity in the distribution of the common law and the French civil law. In those places where the common law was extensively implanted (that is, in sparsely populated territories at the time of colonization), we observe the usual features associated with this legal tradition, such as higher creditor and investor rights, more efficient legal systems and less burdensome regulation. In contrast, when the introduction of the common law was superficial, as generally occurred in densely populated areas where indigenous law and rules were already in place, legal systems that emerged are not related (or related to a much lesser extent) to such features.[61] As far as the civil law tradition is concerned, the uniform distribution of the French civil law is reflected in a homogeneous effect on legal rules irrespective of initial conditions.

At first glance, it may result striking that for five of the seven indicators the common law and the French civil law produce similar outcomes in initially densely populated places. If, as is widely recognized (Zweigert and Kötz 1998), the British were more respectful than the French to indigenous rules and customs, why did the common law not produce better outcomes everywhere? As argued in Section 2.3, in densely populated areas with unfavorable disease conditions Britain applied an indirect form of government that, even though it did not try to impose its legal system over the native population, had negative consequences for subsequent institutional and legal

[60] For all the variables except contract enforcement, coefficients on the 'Spanish law legacy' dummy reflect better legal outcomes than those on the 'Implantation by France' dummy. For investor protection, information sharing, recovery rate and registering a property, differences are statistically significant. This result appears in line with Merryman's (1996) prediction that colonies receiving the French Civil Code directly from France itself did so more rigidly and did not receive the blueprints of how courts could interpret the law rather than simply apply it, as postulated by the revolutionary doctrine.

[61] Regarding our results about the distribution of the common law, its relatively poorer performance in the presence of adverse endowments can be related to the findings in Acemoglu and Johnson (2005), who provided evidence that endowments mattered much more for institutions conducive to financial development than legal origin. Thus, when the levels of indigenous population density or potential settler mortality are high, their negative effects appear to dominate the positive effect from being a common law colony. Put it differently, as we find for the case of high population density, the common law by itself does not guarantee the emergence of institutions supportive of high legal system efficiency and a low regulatory burden.

development. Interestingly, the two indicators for which the common law predicts higher scores at high levels of population density (creditor rights and investor protection) are those more related to what is called "law on the books", whereas the others are more related to "law in action" or law enforcement. This fact is congruent with our story. Although the application of indirect rule did not completely prevent the inclusion of some principles in legal provisions, this form of government undermined the foundations for creating effective and efficient legal systems. The attribution of judicial powers to unconstrained chiefs, which harmed the legitimacy of customary institutions, along with the inconsistencies derived from a parallel jurisdictional system and the lack of an effective attempt to introduce European legal procedures and institutions are likely reasons behind the poor performance in terms of law enforcement of the common law in initially densely populated places. At the end, the result was that the superficial implantation of the common law led to similar negative legal outcomes to the more rigid transplantation of the French civil law.[62]

In all, our results do not appear to dispute Merryman's (1996) prediction that it is better to have a law integrated into existing legal and cultural norms (as occurred in the British settler colonies) than having a law rigidly imposed on a society (as occurred in former French colonies). However, what our analysis has uncovered is the fact that in those colonies where the common law was superficially implanted and failed to integrate with local laws and indigenous customs (as occurred in indirectly ruled British colonies), the differences in terms of legal outcomes with respect to former French colonies vanish.

[62] It is also important to note that the common law is not a legal tradition easy to receive, since it consists of "a matrix of case law and statutes" and involves a complex language (Glendon, Carozza, and Picker 2008). In fact, according to Michaels (2009, p. 788), comparative lawyers have traditionally argued that "the civil law should travel more easily than the common law, because its reliance on systematized codification requires less expertise in the recipient country", and it is known that "the transplantation of formal laws cannot succeed unless it comes with the transport of legal expertise". Thus, where the common law was superficially introduced and not complemented with legal expertise, it is not surprising that we do not observe its generally claimed beneficial effects. Also, the proper functioning of this legal tradition depends on the development of a body of judicial precedents, which is not easy to materialize (Glendon, Gordon, and Osakwe 1985). See also Joireman (2004) for the case of Kenya.

3.5. SENSITIVITY ANALYSIS

3.5.1. Robustness Checks to Baseline Results

In this section we provide extensive robustness checks to the baseline results shown in Table 1. For each dependent variable we conduct three types of robustness checks. Firstly, control variables are incorporated into equation (1) to account for factors that may be correlated with our independent variables and legal rules/outcomes, thereby causing omitted variable bias. 'Years since independence' is a potential determinant of countries' legal systems because a long postcolonial period allows countries to adapt and develop legal rules and institutions according to their needs and eliminate inefficiencies from their colonial past (Beck, Demirgüç-Kunt, and Levine 2003a). Religion is also considered as a possible factor affecting legal systems and institutions. For example, historical hostility of some religions to lending on interest may have influenced the protection of creditor rights (Stulz and Williamson 2003). We also control for the vulnerability of the indigenous population to European diseases. As noted by Easterly and Levine (2012), territories in the New World and Oceania experienced dramatic declines in the native population, which could affect colonial policies.

Another important variable to take into account is ethnolinguistic fractionalization, which is associated with the provision of public goods and the quality of institutions (Alesina, Baqir, and Easterly 1999; Alesina et al. 2003). We also control for a set of variables related to the economic potential of the colonies: the number of years between when a territory was first sighted by Western Europeans and when it was first colonized by a European power, with a shorter gap implying that the territory was more valuable for the colonizer relative to the cost of colonizing it (Woodberry 2004, 2012); an indicator of soil quality as a measure of land suitability for intensive agriculture that may be necessary to sustain large populations (Lange 2009); and landlockedness and distance from the coast as measures of a country's permanent limitation to access large markets and exploit scale economies in production (Sachs and Warner 1995; Easterly and Levine 2003). In the main text we present the *p-value* associated with the joint significance of these four controls, whereas the unpublished appendix contains the statistical significance associated with each individual variable. In addition, the level of economic development, measured by GDP *per capita*, is viewed as an important factor

affecting many legal outcomes (LLS 2008). However, controlling for this variable involves problems since it is endogenous to legal rules. This may spuriously reduce the coefficient on the truly exogenous independent variables, as argued in La Porta et al. (1999). To partially mitigate the endogeneity of GDP *per capita*, we include its value for the year 1970 –though the same results follow if measured in 2000. Moreover, as further control variables we add continental dummies for Africa, America and Asia.

Secondly, we use the potential mortality rate of European settlers as an alternative endowments indicator. Although we previously argued that precolonial population density is the best possible indicator of endowments available, we find it appealing to check the empirical validity of our baseline results to this alternative indicator introduced by AJR (2001). According to these authors, a lower mortality rate implied higher feasibility of settlements by Europeans, which resulted in better institutions transferred to the colonies, that is, those protecting property rights and political freedom. In addition, a larger number of European settlers facilitated the introduction and application of European laws in the colonies. Thirdly, we test whether our results are driven by influential observations. We consider several statistical methods to identify outliers such as leverage, standardized residuals and Cook's distance.[63] Once outliers are detected, we exclude these countries and rerun the regressions.

Tables 2 to 8 present the results from the application of all these robustness checks to the seven indicators covering the dimensions *creditor and investor rights*, *disclosure*, *legal system efficiency* and *regulation*. We anticipate that our previous findings are broadly confirmed. As shown in Tables 2 and 3 for creditor and investor rights, the effect of the common law appears negatively related to the level of precolonial population density.[64] In contrast, endowments do not play any role in explaining the effect of 'Implantation by France' and 'Spanish law legacy'. These diverging patterns

[63] The cut-offs of the detection methods are: leverage, $2 \cdot k/n$; standardized residuals, |2|; Cook's distance, $4/n$; where k is the number of parameters and n is the number of observations. Similar results follow with the DFITS criterion.

[64] Only in one specification does the interaction term lose the statistical significance. It is when we include GDP *per capita* as a control variable for investor protection. However, we previously warned about the endogeneity problems associated with this control variable, which may spuriously reduce the coefficient and significance of the truly exogenous regressors.

among legal traditions are responsible for the fact that differences between the common law and the civil law categories are larger at low levels of indigenous population density than they are at high levels, as observed by comparing the coefficients on the civil law dummies with those in the bottom part of the tables. It can also be noted that the negative coefficients on the dummy variable for 'Spanish law legacy' are smaller than those for 'Implantation by France', thus supporting the existence of higher creditor and investor rights in the former. Regarding information sharing (Table 4), we observe that the effect of the common law is negatively related to endowments, whereas the interaction terms for the civil law groups are always insignificant. Again, 'Spanish law legacy' is associated with deeper credit information than the common law and the other civil law categories.

Table 2
Robustness Checks: Creditor Rights

	Control variables								Outliers		
	Years since independence	Religion (p-value)	High indigenous mortality	Ethnic fractiona-lization	Economic potential (p-value)	Ln GDP pc 1970	Continental dummies (p-value)	Settler mortality as endowments indicator	Leverage	Standard. Residuals	Cook's D
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Common law (Ref. group)											
- Civil law:											
• Implantation by France	-4.379***	-4.270***	-4.325***	-4.209***	-4.129***	-4.144***	-4.279***	-7.297***	-4.484***	-4.640***	-4.826***
	(0.35)	(0.38)	(0.39)	(0.45)	(0.48)	(0.36)	(0.38)	(1.75)	(0.35)	(0.31)	(0.30)
• Spanish law legacy	-3.921***	-3.654***	-3.861***	-3.761***	-3.947***	-3.867***	-3.861***	-6.954	-4.150***	-3.992***	-4.204***
	(0.56)	(0.60)	(0.48)	(0.43)	(0.51)	(0.44)	(0.50)	(4.30)	(0.46)	(0.40)	(0.49)
• Others	-4.059***	-3.837***	-4.026***	-3.917***	-3.988***	-3.984***	-4.044***	-0.488	-4.018***	-4.265***	-4.324***
	(0.38)	(0.46)	(0.39)	(0.40)	(0.48)	(0.36)	(0.38)	(1.81)	(0.37)	(0.34)	(0.35)
- Common law x endowments	-0.430***	-0.366**	-0.426***	-0.392**	-0.488***	-0.354**	-0.432***	-0.525**	-0.438***	-0.450***	-0.517***
	(0.16)	(0.18)	(0.15)	(0.16)	(0.16)	(0.17)	(0.15)	(0.25)	(0.15)	(0.13)	(0.12)
- Civil law x endowments:											
• Implantation by France x endowments	-0.106	-0.054	-0.104	-0.183	-0.199	-0.188	-0.133	0.130	0.051	-0.080	0.113
	(0.25)	(0.28)	(0.25)	(0.26)	(0.32)	(0.26)	(0.24)	(0.22)	(0.31)	(0.18)	(0.08)
• Spanish law legacy x endowments	0.198	0.192	0.196	0.221	0.183	0.271	0.197	0.226	1.363**	0.191	0.863
	(0.29)	(0.30)	(0.29)	(0.30)	(0.28)	(0.29)	(0.29)	(0.92)	(0.58)	(0.29)	(0.67)
• Others x endowments	-0.265**	-0.254**	-0.253**	-0.282**	-0.206	-0.206*	-0.254**	-1.199***	-0.373***	-0.269**	-0.269**
	(0.12)	(0.12)	(0.12)	(0.12)	(0.15)	(0.11)	(0.12)	(0.27)	(0.10)	(0.11)	(0.11)
Control variables	0.001	[0.953]	0.150	-0.396	[0.300]	0.264	[0.879]				
	(0.00)		(0.45)	(0.64)		(0.18)					
Constant	7.291***	7.653***	7.284***	7.492***	7.073***	5.223***	7.388***	9.543***	7.343***	7.556***	7.616***
	(0.33)	(0.99)	(0.36)	(0.37)	(0.70)	(1.41)	(0.47)	(1.12)	(0.29)	(0.25)	(0.27)
R^2	0.72	0.71	0.72	0.71	0.73	0.72	0.72	0.68	0.72	0.80	0.80
Number of observations	100	98	100	98	98	98	100	75	92	94	91
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)											
Imp. by France - Common law	-3.6[a]	-3.6[a]	-3.6[a]	-3.7[a]	-3.5[a]	-3.8[a]	-3.6[a]	-3.2[a]	-3.4[a]	-3.8[a]	-3.4[a]
Spanish law leg.- Common law	-2.5[a]	-2.4[a]	-2.4[a]	-2.4[a]	-2.4[a]	-2.4[a]	-2.4[a]	-2.3	0.0	-2.5[a]	-1.0
Others - Common law	-3.7[a]	-3.6[a]	-3.6[a]	-3.7[a]	-3.3[a]	-3.6[a]	-3.6[a]	-4.7[a]	-3.9[a]	-3.8[a]	-3.8[a]

Note. The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 95% confidence level.

Table 3
Robustness Checks: Investor Protection

	Control variables							Settler mortality as endowments indicator	Outliers		
	Years since independence	Religion (p-value)	High indigenous mortality	Ethnic fractiona-lization	Economic potential (p-value)	Ln GDP pc 1970	Continental dummies (p-value)		Leverage	Standard. Residuals	Cook's D
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Common law (Ref. group)											
- Civil law:											
• Implantation by France	-2.578***	-2.458***	-2.379***	-2.485***	-2.223***	-2.060***	-1.968***	-7.534***	-2.394***	-2.524***	-2.700***
	(0.45)	(0.48)	(0.49)	(0.44)	(0.46)	(0.44)	(0.55)	(1.51)	(0.44)	(0.41)	(0.37)
• Spanish law legacy	-2.525***	-1.355**	-1.834***	-1.511***	-1.763***	-1.759***	-1.678***	-7.133**	-1.553***	-1.590***	-1.501***
	(0.53)	(0.54)	(0.39)	(0.42)	(0.46)	(0.40)	(0.37)	(3.18)	(0.52)	(0.38)	(0.41)
• Others	-1.508***	-1.405**	-1.380***	-1.391***	-1.765***	-1.576***	-1.480***	-2.535	-0.988**	-1.139***	-1.050***
	(0.44)	(0.57)	(0.52)	(0.47)	(0.54)	(0.47)	(0.46)	(4.61)	(0.46)	(0.35)	(0.38)
- Common law x endowments	-0.287*	-0.317*	-0.305*	-0.297*	-0.368**	-0.172	-0.331**	-0.808***	-0.341**	-0.309**	-0.281*
	(0.16)	(0.17)	(0.17)	(0.16)	(0.15)	(0.15)	(0.14)	(0.21)	(0.16)	(0.15)	(0.16)
- Civil law x endowments:											
• Implantation by France x endowments	0.247	0.153	0.231	0.229	-0.009	0.055	-0.013	0.230	0.036	0.209	0.346*
	(0.24)	(0.26)	(0.24)	(0.24)	(0.30)	(0.23)	(0.26)	(0.20)	(0.29)	(0.23)	(0.19)
• Spanish law legacy x endowments	-0.234	-0.266	-0.262	-0.285	-0.332	-0.116	-0.255	0.416	-0.367	-0.277	-0.277
	(0.20)	(0.20)	(0.20)	(0.20)	(0.25)	(0.23)	(0.20)	(0.65)	(0.85)	(0.20)	(0.20)
• Others x endowments	-0.033	-0.087	-0.008	-0.048	0.056	0.076	-0.029	-0.551	-0.442**	-0.201	-0.201
	(0.15)	(0.18)	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)	(0.87)	(0.19)	(0.13)	(0.13)
Control variables	0.008**	[0.892]	0.460	0.111	[0.014]	0.531***	[0.013]				
	(0.00)		(0.45)	(0.63)		(0.16)					
Constant	5.540***	5.817***	5.704***	5.769***	6.252***	1.619	6.535***	9.649***	5.886***	5.894***	5.806***
	(0.33)	(0.95)	(0.39)	(0.46)	(0.66)	(1.25)	(0.44)	(0.96)	(0.28)	(0.24)	(0.28)
R^2	0.39	0.35	0.38	0.34	0.45	0.43	0.44	0.56	0.39	0.44	0.38
Number of observations	100	98	100	98	98	98	100	75	92	95	97
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)											
Imp. by France - Common law	-1.3[a]	-1.4[a]	-1.1[a]	-1.3[a]	-1.4[a]	-1.5[a]	-1.2[a]	-1.1[a]	-1.5[a]	-1.3[a]	-1.3[a]
Spanish law leg.- Common law	-2.4[a]	-1.2	-1.7[a]	-1.5[a]	-1.7[a]	-1.6[a]	-1.5[a]	0.5	-1.6	-1.5[a]	-1.5[a]
Others - Common law	-0.9[a]	-0.9	-0.7	-0.8	-0.8	-1.0[a]	-0.8	-0.9	-1.2[a]	-0.9[a]	-0.9

Note. See notes to Table 2.

Table 4
Robustness Checks: Information Sharing

	Control variables							Settler mortality as endowments indicator	Outliers		
	Years since independence	Religion (p-value)	High indigenous mortality	Ethnic fractiona-lization	Economic potential (p-value)	Ln GDP pc 1970	Continental dummies (p-value)		Leverage	Standard. Residuals	Cook's D
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Common law (Ref. group)											
- Civil law:											
• Implantation by France	-0.992**	-0.852*	-0.951**	-0.640	-1.046**	-0.326	-0.480	-5.364***	-0.707*	-0.513	-0.452
	(0.44)	(0.49)	(0.47)	(0.45)	(0.45)	(0.37)	(0.49)	(1.06)	(0.39)	(0.39)	(0.37)
• Spanish law legacy	0.418	2.698***	3.177***	2.953***	2.184***	2.750***	3.377***	-1.382	2.891***	3.255***	3.132***
	(0.54)	(0.73)	(0.55)	(0.42)	(0.50)	(0.38)	(0.56)	(3.52)	(0.41)	(0.37)	(0.39)
• Others	-0.016	0.173	0.044	0.301	-0.562	0.219	0.022	-7.675***	0.164	0.427	0.216
	(0.45)	(0.63)	(0.62)	(0.59)	(0.62)	(0.62)	(0.60)	(2.74)	(0.52)	(0.57)	(0.52)
- Common law x endowments	-0.489***	-0.652***	-0.666***	-0.586***	-0.618***	-0.448**	-0.657***	-1.184***	-0.632***	-0.837***	-0.828***
	(0.16)	(0.19)	(0.18)	(0.19)	(0.17)	(0.19)	(0.16)	(0.17)	(0.18)	(0.18)	(0.17)
- Civil law x endowments:											
• Implantation by France x endowments	0.178	-0.003	0.054	-0.013	0.533	-0.094	-0.177	-0.139	-0.091	0.075	-0.187
	(0.30)	(0.33)	(0.30)	(0.29)	(0.39)	(0.22)	(0.31)	(0.11)	(0.21)	(0.29)	(0.20)
• Spanish law legacy x endowments	-0.111	-0.202	-0.239	-0.189	-0.366*	-0.049	-0.231	-0.206	-0.057	-0.225	-0.225
	(0.18)	(0.23)	(0.22)	(0.22)	(0.20)	(0.19)	(0.22)	(0.78)	(0.54)	(0.21)	(0.21)
• Others x endowments	-0.139	-0.231	-0.245	-0.210	0.039	-0.059	-0.262	0.421	-0.361	-0.200	-0.146
	(0.13)	(0.20)	(0.22)	(0.21)	(0.22)	(0.23)	(0.24)	(0.49)	(0.25)	(0.22)	(0.15)
Control variables	0.020***	[0.663]	-0.426	-0.485	[0.008]	0.581***	[0.030]				
	(0.00)		(0.57)	(0.67)		(0.18)					
Constant	1.008***	0.525	2.103***	2.129***	3.389***	-2.736*	2.814***	7.352***	1.934***	1.624***	1.746***
	(0.35)	(1.13)	(0.40)	(0.49)	(0.75)	(1.43)	(0.46)	(0.81)	(0.32)	(0.28)	(0.30)
R^2	0.61	0.51	0.50	0.50	0.57	0.55	0.55	0.74	0.50	0.60	0.60
Number of observations	100	98	100	98	98	98	100	75	92	97	95
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)											
Imp. by France - Common law	0.5	0.6	0.7	0.7	1.6[a]	0.5	0.6	1.1[a]	0.5	1.6[a]	1.0
Spanish law leg.- Common law	1.3	3.7[a]	4.2[a]	3.9[a]	2.8[a]	3.7[a]	4.4[a]	4.7[a]	4.2[a]	4.7[a]	4.5[a]
Others - Common law	0.8	1.1	1.0	1.2	1.0	1.1	0.9	2.3[a]	0.8	1.9[a]	1.8[a]

Note. See notes to Table 2.

Tables 5 and 6 include contract enforcement and recovery rate as dependent variables and the results appear in line with our baseline findings. In common law countries we consistently observe for both indicators that the more adverse the endowments (as implied by higher values of precolonial population density or settler mortality) the lower the legal system efficiency. In civil law countries no significant relationship is observed, except for the 'Implantation by France' group when recovery rate is the dependent variable. In this case, the coefficient on the interaction term is positive, but shifts signs when settler mortality is used as endowment. Finally, Tables 7 and 8 present the robustness checks for our regulation indicators: starting a business and registering a property. As with the other legal indicators, we find evidence of heterogeneity in the distribution of legal traditions. The positive and significant coefficient on the interaction between the common law and endowments implies that the regulatory burden in common law countries is positively related to the level of initial

endowments, whereas for 'Implantation by France' and 'Spanish law legacy' there is no clear evidence of such a relationship.

Table 5
Robustness Checks: Contract Enforcement

	Control variables							Settler mortality as endowments indicator	Outliers		
	Years since independence	Religion (p-value)	High indigenous mortality	Ethnic fractiona-lization	Economic potential (p-value)	Ln GDP pc 1970	Continental dummies (p-value)		Leverage	Standard. Residuals	Cook's D
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Common law (Ref. group)											
- Civil law:											
• Implantation by France	0.136	0.109	0.183	0.106	0.164	0.106	0.135	0.875	0.206*	0.156	0.196*
	(0.12)	(0.12)	(0.13)	(0.12)	(0.16)	(0.14)	(0.13)	(0.59)	(0.12)	(0.11)	(0.11)
• Spanish law legacy	0.081	0.034	0.095	0.159	0.078	0.184	0.045	1.543*	0.164	0.185*	0.193*
	(0.16)	(0.17)	(0.13)	(0.12)	(0.13)	(0.11)	(0.13)	(0.92)	(0.12)	(0.11)	(0.11)
• Others	0.260*	0.242	0.288*	0.254*	0.305*	0.326**	0.286*	2.282***	0.203	0.123	0.151
	(0.16)	(0.18)	(0.15)	(0.15)	(0.16)	(0.16)	(0.15)	(0.84)	(0.17)	(0.12)	(0.12)
- Common law x endowments	0.181***	0.165***	0.187***	0.162***	0.172***	0.163***	0.184***	0.155***	0.176***	0.167***	0.198***
	(0.05)	(0.06)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.06)	(0.05)	(0.04)	(0.04)
- Civil law x endowments:											
• Implantation by France x endowments	-0.060	-0.051	-0.057	-0.052	-0.025	-0.052	-0.032	-0.027	-0.156**	-0.064	-0.110*
	(0.07)	(0.07)	(0.07)	(0.07)	(0.10)	(0.07)	(0.07)	(0.09)	(0.06)	(0.07)	(0.07)
• Spanish law legacy x endowments	0.019	0.006	0.020	0.010	-0.005	0.003	0.020	-0.163	0.038	0.015	0.015
	(0.06)	(0.06)	(0.06)	(0.06)	(0.07)	(0.06)	(0.06)	(0.18)	(0.16)	(0.06)	(0.06)
• Others x endowments	-0.049	-0.044	-0.036	-0.045	-0.048	-0.062	-0.031	-0.271	-0.085	-0.010	-0.024
	(0.07)	(0.07)	(0.06)	(0.07)	(0.07)	(0.07)	(0.06)	(0.17)	(0.09)	(0.06)	(0.03)
Control variables	0.001	[0.827]	0.139	0.066	[0.358]	-0.041	[0.236]				
	(0.00)		(0.14)	(0.17)		(0.06)					
Constant	6.293***	6.277***	6.271***	6.310***	6.431***	6.655***	6.197***	5.695***	6.326***	6.311***	6.304***
	(0.10)	(0.30)	(0.10)	(0.12)	(0.17)	(0.49)	(0.12)	(0.30)	(0.08)	(0.07)	(0.07)
R^2	0.23	0.22	0.24	0.20	0.26	0.25	0.26	0.17	0.25	0.24	0.29
Number of observations	100	98	100	98	98	98	100	75	92	95	92
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)											
Imp. by France - Common law	-0.4[a]	-0.4[a]	-0.4[a]	-0.4[a]	-0.3	-0.4[a]	-0.4[a]	-0.3	-0.6[a]	-0.4[a]	-0.5[a]
Spanish law leg.- Common law	-0.3	-0.3	-0.3	-0.2	-0.3	-0.2	-0.3	-0.4	-0.2	-0.2	-0.2
Others - Common law	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.4	-0.4[a]	-0.3	-0.4[a]

Note. See notes to Table 2.

Table 6
Robustness Checks: Recovery Rate

	Control variables							Settler mortality as endowments indicator	Outliers		
	Years since independence	Religion (p-value)	High indigenous mortality	Ethnic fractiona-lization	Economic potential (p-value)	Ln GDP pc 1970	Continental dummies (p-value)		Leverage	Standard. Residuals	Cook's D
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Common law (Ref. group)											
- Civil law:											
• Implantation by France	-35.948***	-35.949***	-34.811***	-36.092***	-35.154***	-27.935***	-30.074***	-40.764*	-35.923***	-37.131***	-31.073***
	(4.79)	(5.07)	(4.50)	(4.55)	(4.22)	(4.43)	(5.01)	(22.28)	(4.76)	(4.19)	(4.40)
• Spanish law legacy	-26.615***	-11.906	-12.376*	-10.752*	-16.104***	-14.804***	-9.644	-13.730	-15.570***	-16.808***	-12.408**
	(6.98)	(8.08)	(7.23)	(5.45)	(6.01)	(5.09)	(7.68)	(51.98)	(5.19)	(4.55)	(4.98)
• Others	-29.725***	-30.501***	-28.862***	-29.740***	-35.173***	-30.945***	-29.689***	-42.921*	-25.910***	-31.110***	-26.229***
	(5.37)	(5.05)	(4.76)	(5.02)	(4.84)	(4.19)	(3.91)	(25.12)	(6.39)	(4.62)	(4.96)
- Common law x endowments	-6.585***	-8.218***	-7.366***	-6.981***	-7.074***	-4.798**	-7.527***	-9.934***	-7.411***	-6.984***	-6.241***
	(1.93)	(2.44)	(2.15)	(2.19)	(1.87)	(1.95)	(1.75)	(2.32)	(2.03)	(1.82)	(2.26)
- Civil law x endowments:											
• Implantation by France x endowments	10.142***	7.061**	9.580***	10.766***	10.631***	7.166**	6.817*	-5.730*	10.888***	9.552***	7.614***
	(2.88)	(2.74)	(2.67)	(2.63)	(3.08)	(3.09)	(3.83)	(3.13)	(3.48)	(2.63)	(2.12)
• Spanish law legacy x endowments	0.859	0.206	0.217	-0.304	-1.093	2.688	0.266	-10.272	11.273	-2.956	-1.106
	(3.91)	(4.09)	(3.96)	(3.99)	(4.10)	(3.72)	(3.97)	(11.30)	(8.35)	(2.25)	(3.11)
• Others x endowments	1.486	-0.088	1.192	1.326	2.430	2.895***	0.854	-7.418*	-2.364	1.132	1.132
	(1.70)	(1.16)	(1.51)	(1.30)	(1.49)	(0.99)	(1.28)	(4.16)	(2.40)	(1.27)	(1.26)
Control variables	0.116**	[0.112]	0.575	6.700	[0.003]	8.220***	[0.010]				
	(0.05)		(6.78)	(6.62)		(1.97)					
Constant	32.801***	27.182*	37.909***	34.013***	52.885***	-27.923*	47.092***	86.741***	38.137***	40.287***	35.407***
	(4.52)	(16.31)	(3.83)	(5.24)	(6.46)	(15.41)	(4.28)	(11.98)	(3.61)	(3.18)	(3.66)
R^2	0.47	0.44	0.43	0.42	0.50	0.52	0.49	0.56	0.44	0.54	0.39
Number of observations	100	98	100	98	98	98	100	75	92	93	94
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)											
Imp. by France - Common law	2.6	-0.8	4.2	4.8	5.6	-0.4	3.0	-14.6[a]	6.2	0.9	0.8
Spanish law leg.- Common law	-9.5	7.5	5.1	4.6	-2.3	2.4	8.3	-15.8	27.5	-7.5	-0.6
Others - Common law	-11.1	-11.8[a]	-9.2	-10.6	-13.3[a]	-13.2[a]	-10.4	-27.3[a]	-14.3[a]	-12.4[a]	-9.3

Note. See notes to Table 2.

Table 7
Robustness Checks: Starting a Business

	Control variables							Settler mortality as endowments indicator	Outliers		
	Years since independence	Religion (p-value)	High indigenous mortality	Ethnic fractiona-lization	Economic potential (p-value)	Ln GDP pc 1970	Continental dummies (p-value)		Leverage	Standard. Residuals	Cook's D
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Common law (Ref. group)											
- Civil law:											
• Implantation by France	0.864***	0.955***	0.707**	0.741**	0.851***	0.556*	0.686*	1.005	0.901***	0.854***	0.775***
	(0.29)	(0.27)	(0.32)	(0.32)	(0.31)	(0.28)	(0.35)	(1.04)	(0.28)	(0.26)	(0.26)
• Spanish law legacy	1.230***	1.221***	0.985***	0.767***	0.868***	0.861***	0.920***	4.100*	0.841***	0.776***	0.747***
	(0.37)	(0.33)	(0.23)	(0.21)	(0.22)	(0.19)	(0.24)	(2.11)	(0.22)	(0.18)	(0.19)
• Others	1.412***	1.692***	1.315***	1.342***	1.651***	1.453***	1.370***	4.542*	1.204***	1.333***	1.209***
	(0.28)	(0.29)	(0.31)	(0.29)	(0.31)	(0.28)	(0.29)	(2.57)	(0.31)	(0.27)	(0.24)
- Common law x endowments	0.197**	0.256**	0.191*	0.210*	0.233***	0.122	0.213**	0.253**	0.224**	0.259***	0.174**
	(0.09)	(0.12)	(0.10)	(0.11)	(0.09)	(0.09)	(0.10)	(0.11)	(0.10)	(0.08)	(0.08)
- Civil law x endowments:											
• Implantation by France x endowments	-0.273	-0.224	-0.275	-0.202	-0.257	-0.161	-0.227	0.128	-0.352*	-0.254	-0.172
	(0.17)	(0.15)	(0.17)	(0.19)	(0.19)	(0.17)	(0.19)	(0.14)	(0.20)	(0.16)	(0.14)
• Spanish law legacy x endowments	0.067	0.144	0.075	0.067	0.091	-0.009	0.077	-0.501	-0.185	0.088	0.088
	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.46)	(0.27)	(0.11)	(0.11)
• Others x endowments	-0.396***	-0.384***	-0.428***	-0.370***	-0.475***	-0.463***	-0.414***	-0.455	-0.258	-0.394***	-0.308***
	(0.10)	(0.10)	(0.11)	(0.10)	(0.11)	(0.11)	(0.10)	(0.50)	(0.19)	(0.10)	(0.08)
Control variables	-0.004	[0.004]	-0.422	0.288	[0.092]	-0.322***	[0.406]				
	(0.00)		(0.28)	(0.36)		(0.09)					
Constant	3.421***	3.432***	3.413***	3.112***	3.128***	5.835***	3.207***	2.058***	3.246***	3.224***	3.253***
	(0.20)	(0.79)	(0.18)	(0.26)	(0.31)	(0.74)	(0.21)	(0.59)	(0.15)	(0.13)	(0.14)
R^2	0.39	0.42	0.39	0.36	0.43	0.44	0.38	0.31	0.31	0.42	0.32
Number of observations	100	98	100	98	98	98	100	75	92	95	94
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)											
Imp. by France - Common law	-0.2	-0.1	-0.4	-0.2	-0.3	-0.1	-0.3	0.2	-0.4	-0.3	0.0
Spanish law leg.- Common law	0.9[a]	1.0[a]	0.7	0.4	0.5	0.6	0.6	-0.6	-0.1	0.4	0.5
Others - Common law	0.0	0.2	-0.1	0.0	0.0	0.1	-0.1	0.1	0.1	-0.2	0.1

Note. See notes to Table 2.

Table 8
Robustness Checks: Registering a Property

	Control variables							Settler mortality as endowments indicator	Outliers		
	Years since independence	Religion (p-value)	High indigenous mortality	Ethnic fractiona-lization	Economic potential (p-value)	Ln GDP pc 1970	Continental dummies (p-value)		Leverage	Standard. Residuals	Cook's D
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Common law (Ref. group)											
- Civil law:											
• Implantation by France	0.868**	0.945***	0.875**	0.778*	1.114***	0.605*	0.666*	2.113*	0.726**	0.516**	0.516**
	(0.34)	(0.30)	(0.38)	(0.43)	(0.27)	(0.34)	(0.38)	(1.19)	(0.35)	(0.25)	(0.25)
• Spanish law legacy	0.124	-0.142	0.052	0.119	-0.011	0.172	-0.182	-1.693	0.048	-0.065	-0.065
	(0.47)	(0.37)	(0.27)	(0.21)	(0.21)	(0.21)	(0.24)	(2.15)	(0.20)	(0.18)	(0.18)
• Others	0.453	0.546*	0.456	0.497*	0.753**	0.580*	0.505*	3.099**	0.239	0.314	0.168
	(0.28)	(0.33)	(0.28)	(0.27)	(0.30)	(0.30)	(0.25)	(1.30)	(0.34)	(0.26)	(0.25)
- Common law x endowments	0.311***	0.400***	0.317***	0.320***	0.270***	0.218**	0.329***	0.445***	0.314***	0.341***	0.341***
	(0.09)	(0.09)	(0.08)	(0.09)	(0.07)	(0.09)	(0.09)	(0.13)	(0.09)	(0.07)	(0.07)
- Civil law x endowments:											
• Implantation by France x endowments	-0.205	-0.053	-0.201	-0.135	-0.207	-0.114	-0.056	0.077	-0.006	-0.096	-0.096
	(0.19)	(0.18)	(0.19)	(0.24)	(0.19)	(0.19)	(0.19)	(0.19)	(0.21)	(0.16)	(0.16)
• Spanish law legacy x endowments	-0.085	-0.089	-0.081	-0.110	-0.089	-0.174	-0.079	0.810*	-0.009	-0.082	-0.082
	(0.10)	(0.10)	(0.09)	(0.10)	(0.10)	(0.11)	(0.09)	(0.46)	(0.23)	(0.09)	(0.09)
• Others x endowments	0.064	0.148	0.069	0.096	0.079	0.004	0.101	-0.036	0.243	0.065	0.067
	(0.13)	(0.12)	(0.13)	(0.13)	(0.13)	(0.12)	(0.10)	(0.25)	(0.19)	(0.13)	(0.10)
Control variables	0.000	[0.020]	0.036	0.373	[0.002]	-0.303***	[0.022]				
	(0.00)		(0.29)	(0.46)		(0.11)					
Constant	3.773***	3.839***	3.740***	3.549***	3.240***	6.190***	3.243***	1.981***	3.754***	3.890***	3.890***
	(0.18)	(0.50)	(0.18)	(0.28)	(0.36)	(0.87)	(0.27)	(0.67)	(0.15)	(0.11)	(0.11)
R^2	0.23	0.31	0.23	0.25	0.37	0.30	0.31	0.35	0.26	0.26	0.28
Number of observations	100	98	100	98	98	98	100	75	92	97	93
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)											
Imp. by France - Common law	-0.3	-0.1	-0.3	-0.3	0.0	-0.2	-0.2	-0.2	0.0	-0.5	-0.5
Spanish law leg.- Common law	-0.8	-1.3[a]	-0.9	-0.9[a]	-0.8[a]	-0.7	-1.1[a]	0.6	-0.7	-1.0[a]	-1.0[a]
Others - Common law	-0.1	0.0	-0.1	0.0	0.3	0.1	0.0	0.1	0.1	-0.3	-0.5

Note. See notes to Table 2.

In summary, our basic findings shown in Table 1 are robust to the inclusion of additional control variables,[65] the use of the potential settler mortality rate as an alternative endowments indicator and the exclusion of outliers. As further unreported robustness checks, we run all regressions –and not just the basic specification– using the potential settler mortality rate, and it is remarkable that the baseline results broadly hold. Moreover, to be sure that our findings are not affected by the residual category of French civil law countries 'Others', we redid the analysis without the 18 countries belonging to that group. Remarkably, the results remain fairly robust with the reduced sample of colonies. Finally, the baseline results are also robust to employing legal rules/outcomes data for the year 2010 or an average over the period 2006-2010. In

[65] Of all controls, the set of economic potential indicators and GDP *per capita* appear significantly related to better legal institutions for five of the seven dependent variables, while the continental dummies are statistically significant for four, years since independence for three and religion for only two.

support of the presence of higher heterogeneity in the distribution of the common law vs. the civil law categories, we also show that the standard deviation and coefficient of variation of each dependent variable is generally higher in the common law than in the 'Implantation by France' and 'Spanish law legacy' groups.[66]

3.5.2. Using Business and Household Survey Data on Legal Outcomes

In this subsection we complement the previous analysis that employed rule-based indicators of legal and regulatory institutional structures from *Doing Business* with a wide array of *de facto* indicators measuring how firms and households perceive and experience the legal and regulatory systems. The use of outcome-based legal indicators derived from the direct experience of firms and households enables us to better measure the consequences arising from the actual implementation and enforcement of laws in practice. Several sources of enterprise and household survey data are employed. Concerning the former, we use the Enterprise Surveys (ES) and the World Business Environment Survey (WBES) of the World Bank Group (see World Bank [2013] and Kaufmann and Stone [2003], respectively). As for the latter, we employ data from the Gallup World Poll –GWP hereafter– (2013) and the World Justice Project (WJP).[67]

As mentioned in the ES homepage, data from ES and WBES (obtained from face-to-face interviews with managers) are highly complementary to *Doing Business* data (obtained from local experts on a specific legal/regulation area). Whereas the latter measures what a standardized firm should expect if it complies with all official regulations and legal requirements in place, the former measures the actual experiences of a firm regarding a particular legal or regulatory aspect in the normal course of business, which does not necessarily entail the full compliance or enforcement of the laws and regulations in place. The variables we select from the surveys are those that

[66] For reasons of space, all these results are not reported but are available in the unpublished appendix.

[67] The ES and WBES are conducted for a large number of firms in the main sectors of economic activity in a large number of countries. Other papers using WBES data are Acemoglu and Johnson (2005), Beck, Demirgüç-Kunt, and Maksimovic (2005), and Beck, Demirgüç-Kunt, and Levine (2005). The GWP is a survey polling representative samples of households in a large sample of countries, and the WJP is a survey that combines expert opinion with rigorous polling of 1,000 general public respondents in a large sample of countries (Botero and Ponce 2010). In the four cases, we take averages of the scores obtained for all units surveyed in each country.

better reflect firms' (and households' when it comes to household surveys) view on the quality of courts, enforcement of regulations, and other aspects related to the availability of information on laws and regulations and their actual consistency and predictability. More specifically, the indicator taken from ES relates to firms' assessment of whether courts are fair, impartial and uncorrupted. From WBES, which contains a larger number of indicators of legal outcomes, we retrieve the following measures: availability of information on laws and regulations, interpretation of laws and regulations are consistent, overall quality and efficiency of courts, courts are fair and impartial, courts are honest and uncorrupted, and court decisions are enforced.[68]

As far as household surveys data are concerned, we employ an indicator of confidence in the judicial and security systems constructed on the basis of the following subject areas considered by the GWP: confidence in the police force, confidence in the judicial system, have you had money property stolen from you or another household member?, and have you been assaulted or mugged? In addition, we employ the following WJP indicators related to regulatory enforcement and civil justice functioning and enforcement: government regulations are effectively enforced, government regulations are applied and enforced without improper influence, civil justice is free of improper government influence, civil justice is not subject to unreasonable delays, civil justice is effectively enforced, and alternative dispute resolution mechanisms are accessible, impartial, and effective.[69]

Table 9 presents the baseline results for the 14 survey-based legal/regulatory indicators. As with *Doing Business* data, we find strong evidence of heterogeneity in the

[68] The ES indicator ranges from 1 (strongly disagree) to 4 (strongly agree), and the WBES indicators' scores range from 1 (fully agree) to 6 (fully disagree). We rescale WBES indicators so that higher scores imply better legal and regulatory outcomes for the respondents. Since the average for each country is calculated from microdata, the regressions are weighted by the inverse of the standard errors of the mean values for each country, thus taking into account the precision of the average values estimated.

[69] The use of the latter indicator constitutes a novelty in the literature that has focused exclusively on public contract enforcement institutions. This variable is related to private arrangements for dispute resolution and allows us to shed some light on the effect of legal traditions on households' perceptions about the functioning of institutions of private contract enforcement. See Beck (2012) for a discussion about the need to complement the use of indicators of public institutions outcomes with those of private legal mechanisms for conflict resolution.

effect of legal traditions on legal outcomes, since the coefficient on the interaction between the common law and endowments is consistently negative and significant, whereas the respective coefficient for the civil law groups is generally insignificant. This implies that the common law leads to better legal and regulatory outcomes at low levels of indigenous population density, whereas at high levels the difference with the civil law groups generally vanishes (as presented in the bottom panel of the table). This makes us confident that what we are capturing is not an artifact caused by the use of rule-based indicators, but it represents the distinct influence that legal traditions and their interaction with initial endowments exert on the actual experiences of firms and households in their dealings with the courts and the legal and regulatory system (that is, on law in action).

Table 9

Legal Outcome Variables from Business and Household Surveys

Dependent variable	Enterprise Surveys	World Business Environment Survey						Gallup World Poll	World Justice Project					
	Court system is fair, impartial and uncorrupted	Availability of information on law and regulations	Interpretation of law and regulations consistent	Quality and efficiency of courts	Courts are fair and impartial	Courts are honest	Courts enforceability	Confidence in judicial system and security	Enforcement of Gov. regulations	No improper influence in applying Gov. regulations	No improper Gov. influence on civil justice	No unreasonable delays	Enforcement of civil justice	Alternative dispute resolution mechanisms
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
- Common law (Ref. group)														
- Civil law groups:														
• Implantation by France	-0.337**	-0.954**	-0.918***	-1.627***	-1.847***	-1.896***	-1.314***	-0.047	-0.097	-0.107	-0.193**	-0.119	-0.164*	0.044
	(0.13)	(0.38)	(0.31)	(0.22)	(0.30)	(0.36)	(0.36)	(0.06)	(0.06)	(0.10)	(0.08)	(0.10)	(0.10)	(0.09)
• Spanish law legacy	-0.668***	-0.318**	-0.554***	-1.103***	-1.400***	-1.246***	-0.907***	-0.176***	-0.062*	-0.024	-0.123***	-0.126***	-0.155***	-0.030
	(0.10)	(0.12)	(0.13)	(0.17)	(0.21)	(0.24)	(0.18)	(0.03)	(0.03)	(0.04)	(0.04)	(0.03)	(0.04)	(0.03)
• Others	-0.002	-0.632***	-0.740***	-0.712***	-0.943**	-1.042**	-0.543	-0.011	-0.019	0.017	0.012	-0.108**	-0.174***	-0.121***
	(0.36)	(0.23)	(0.22)	(0.23)	(0.42)	(0.51)	(0.38)	(0.04)	(0.04)	(0.05)	(0.06)	(0.04)	(0.04)	(0.04)
- Common law x Pop. dens.	-0.112**	-0.160***	-0.164***	-0.182**	-0.173*	-0.271***	-0.191**	-0.024***	-0.063***	-0.088***	-0.029**	-0.054***	-0.065***	-0.038***
	(0.05)	(0.05)	(0.05)	(0.07)	(0.09)	(0.10)	(0.08)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
- Civil law groups x Pop. dens.:														
• Implantation by France x Pop. dens.	0.065	0.591*	0.520*	0.720**	0.553	0.591	0.617*	0.007	0.011	-0.025	0.045	0.054	0.038	-0.061
	(0.12)	(0.32)	(0.27)	(0.27)	(0.38)	(0.41)	(0.33)	(0.03)	(0.04)	(0.05)	(0.04)	(0.06)	(0.05)	(0.04)
• Spanish law legacy x Pop. dens.	-0.141	-0.018	0.047	0.070	-0.053	-0.310	-0.288*	-0.026	-0.040	-0.032	-0.022	-0.028	-0.058	-0.022*
	(0.10)	(0.11)	(0.12)	(0.11)	(0.13)	(0.25)	(0.16)	(0.02)	(0.03)	(0.04)	(0.04)	(0.03)	(0.05)	(0.01)
• Others x Pop. dens.	0.110	0.063***	0.248***	0.303***	0.277**	0.264*	0.144	0.027*	-0.011	-0.019	0.002	0.011	0.016	0.010
	(0.10)	(0.02)	(0.02)	(0.02)	(0.11)	(0.14)	(0.12)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.03)	(0.01)
Constant	2.485***	4.369***	4.071***	4.096***	4.298***	4.139***	3.935***	0.704***	0.513***	0.576***	0.621***	0.418***	0.542***	0.686***
	(0.05)	(0.09)	(0.10)	(0.13)	(0.15)	(0.17)	(0.13)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)
R^2	0.31	0.47	0.56	0.66	0.62	0.56	0.54	0.36	0.51	0.55	0.28	0.48	0.55	0.45
Number of observations	78	47	47	47	47	47	47	87	53	53	53	53	53	53
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)														
Imp. by France - Common law	0.1	0.8	0.7	0.5	-0.2	0.1	0.5	0.0	0.1	0.0	0.0	0.1	0.1	0.0
Spanish law leg.- Common law	-0.7[a]	0.0	-0.1	-0.5	-1.1[a]	-1.3[a]	-1.1[a]	-0.2[a]	0.0	0.1	-0.1	-0.1	-0.1	0.0
Others - Common law	0.5	-0.1	0.2	0.4	0.1	0.2	0.2	0.1[a]	0.1	0.2[a]	0.1	0.0	0.0	0.0

Note. This table presents results from estimating equation (1) for 14 dependent variables obtained from business and household surveys. Higher values for these dependent variables imply better legal outcomes. The description of variables is provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Columns(1) to (7) represent regressions weighted by the inverse of the standard error of the mean of the dependent variable for each country. Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of the table we show the differences in predicted values between the common law and each civil law category when pre-colonial population density is equal to 10 (log=2.3). [a] means that differences are significant at the 95% confidence level.

3.6. EXPLORING THE MECHANISMS

In the previous section we provided evidence that the level of endowments is negatively related to current legal rules and outcomes in British common law colonies, whereas they appear unrelated in former French and Spanish civil law colonies. We explained the results on the basis of the differences in response of western powers' colonial strategies to the level of endowments present in the colonies, with the British colonial strategy being the only one responsive to endowments. In this section, we build on these arguments and try to trace the link between initial endowments and current legal rules/outcomes through the colonial strategy. Since British common law colonies are the only group for which current legal rules/outcomes are clearly related to the level of endowments, we build our identification strategy with this group in mind. Also related is the great variability in colonial arrangements found in the British Empire relative to the French and Spanish empires. In short, direct rule prevailed in extreme form in the case of the settler colonies of North America and Australasia that attracted massive European immigration and featured representative constitutional systems. Direct rule was also prevalent in two types of colonies despite not having attracted a large number of European settlers: the strategically trade-oriented colonies of Hong Kong and Singapore and the plantation colonies of the West Indies.[70] At the other end, indirect rule was widespread among extractive colonies, particularly in sub-Saharan Africa and some parts of Asia, although implemented in different degrees depending on their initial endowments (Lange 2004, 2009). Somewhere in the middle, a hybrid form of colonialism was present in colonies like South Africa, Zimbabwe, Kenya and India (Lange et al. 2006).

As emphasized by Lange (2009, p. 28), while direct rule "entails the construction of a complete system of colonial domination in which both local and central institutions are well integrated and governed by the same authority and organization principles", indirect rule implies "domination via collaborative relations between a dominant colonial center and several regionally based indigenous institutions". The latter led to a bifurcated form of rule: one dominated by local chiefs that ruled the countryside, and another controlled by the tiny colonial administration that normally lacked state capacity to rule beyond the colonial capital city. In contrast, in directly ruled areas, the

[70] Direct rule was also instituted in Sri Lanka (Lange 2009) and Papua New Guinea (Ottley 1995).

colonial legal-administrative apparatus was more centralized and bureaucratized, and could broadcast power throughout an entire territory (system of "integrated domination" versus that of "dispersed domination" in indirectly ruled areas, –see Migdal [1994]; Lange [2009]). Social and society-state relations are regulated countrywide by the same rules, which are enforced by courts presided over by British officials and are entirely based on British colonial law. Whereas direct rule enabled colonies to build legal-administrative capacity through centralization, bureaucratic organization and inclusiveness, which is required for the provision of basic public goods and maintenance of law and order, indirect rule led to ineffective states that lacked infrastructural power and bureaucratization (Lange 2009).[71]

To operationalize the identification strategy we need to employ a suitable measure of the extent of direct/indirect rule in each colony, which can account for the main differences in terms of their legal-administrative apparatus. For that purpose, we employ the ratio of colonially recognized customary court cases over the total number of court cases in 1955, with the latter comprising both customary court cases heard by native chiefs and magistrate court cases handled by British officials.[72] It captures the extent to which British colonial rule hinged on customary legal institutions to regulate social relations, thereby providing an indirect measure of the size of the legal-administrative apparatus of the local traditional administration versus the central colonial administration. Therefore, in directly ruled areas, where magistrate courts presided over

[71] Even if one might be inclined to think that indirect rule ended when the British left the colonies, in the postcolonial period many native governance and legal structures employed to maintain order and enforce law in the countryside have persisted. This has been particularly the case in former African colonies, where the postcolonial state has been unable to control territories far from the capital (Bates 1983; Herbst 2000; Michalopoulos and Papaioannou 2013a). Acemoglu et al. (2014) point out that indirect rule strengthened local elites, who were largely unaccountable to their people, and undermined the colonial and postcolonial central state that was non-bureaucratized, lacked a monopoly of violence and a well-functioning fiscal system, thus failing to provide even the most basic public goods. Acemoglu, Reed, and Robinson (2014) provide evidence consistent with these claims for Sierra Leone.

[72] These data are collected by Lange (2004, 2009) from annual colonial reports, annual judicial reports and other primary sources. When colonies gained independence prior to 1955, he takes the latest available colonial-era data.

by colonial officials applied the British common law uniformly across the whole territory, this measure should take a value of zero.

According to our theory, what lies between colonies' initial endowments and their current legal institutions/outcomes is the form of colonialism implemented and, in turn, the type of legal-administrative institutions present in colonial times. Therefore, our identification strategy based on a Two-stage Least Squares (2SLS) framework is simple. In a first stage, we try to explain the extent of indirect rule on the basis of initial endowments (precolonial population density and settler mortality) and early European settlement.[73] As argued in Section 2.3, such initial conditions could affect the type of colonial strategy that Britain followed. The first stage is represented by the following specification:

$$customary\ courts_i = \gamma_0 + \gamma_1 \cdot endowments_i + \gamma_2 \cdot early\ European\ settlement_i + X_i^{'}\beta + \varepsilon_i \quad (2)$$

where *customary courts* stands for the extent of indirect rule, *endowments* represents precolonial population density or potential mortality rate of European settlers, *early European settlement* reflects the European population share in 1900, and *X* represents a set of exogenous variables capturing the economic potential of a colony from the perspective of the colonizer (the gap between first sighted and colonized, soil quality, landlockedness and distance from the coast).

In a second stage, we regress our seven *Doing Business* legal and regulatory indicators on the extent of indirect rule as well as on a set of exogenous controls

[73] Lange (2004, 2009) forcefully argues for including European settlement in the set of explanatory factors of the extent of indirect rule. This is because the number of European settlers is one of the factors (though not the only one) responsible for the implementation of direct or indirect forms of colonialism. Note, for instance, the case of the settler colonies for which a reception of a large mass of European immigrants was key to the implementation of direct rule and the full implantation of the common law, as it was applied to people who already knew the basic principles. This contrasts with the plantation colonies in the West Indies that received much less European immigration, probably due to the adverse disease conditions to settlement, but were also directly ruled. However, instead of employing an instrumental variables framework to build an identification strategy in similar spirit to ours, Lange (2004, 2009) runs OLS regressions of postcolonial political and development outcomes on the extent of indirect rule, which is considered exogenous and appears included in the same specification along with other possible determinants of indirect rule such as precolonial population density or European settlement.

capturing the economic potential of the colonies before colonization. The second-stage specification is as follows:

$$legal\_outcome_i = \delta_0 + \delta_1 \cdot customary\ courts_i + X_i^{'}\varphi + \nu_i \quad (3)$$

Endowments and early European settlement are considered exogenous regressors employed to extract the exogenous component of colonial strategy and, as such, they are excluded from the second stage. The exclusion restriction entails that, conditional on the controls included in the regression, initial endowments and early European settlement do not affect current legal outcomes directly, but through their impact on the colonial strategy. In other words, our instruments must be uncorrelated with any other determinants of legal outcomes as follows: $corr(instruments_i, \nu_i) = 0$. The results of the overidentification test are presented in Panel C of Table 10.[74] If the results indicate that the extent of indirect rule instrumented through endowments and early European settlement is significant after controlling for colonies' economic potential, we would be ruling out the possibility that colonies with better initial conditions developed faster for other reasons than the colonial strategy implemented, and thus could afford to have more effective legal institutions over the colonial and postcolonial periods.

The result of the first stage is presented in Panel B of Table 10 for the case in which precolonial population density is the only instrument for the extent of indirect rule and the case in which the instruments are precolonial population density and the European population share in 1900.[75] In both first stages, precolonial population density is significantly and positively associated with the extent of indirect rule. When early European settlement is incorporated into the instrument set, this variable enters significantly with a negative sign, indicating that higher European immigration to the colonies led to more direct forms of rule. Regarding the controls for colonies' economic potential, landlockedness, higher distance from the coast and lower land suitability for

[74] The conclusions from this analysis must be tempered due to the limited number of observations available, which prevented us from including more controls beyond measures of colonies' economic potential.

[75] We leave for the unpublished appendix the case in which settler mortality is added to the instrument set since it reduces the sample of British colonies from 37 to 25. Notwithstanding, the results are fairly robust to this change.

agriculture lead to more indirect forms of colonialism. Turning to the 2SLS estimate of the effect of the extent of indirect rule on current legal rules/outcomes, Panel A of Table 10 shows strong evidence of a highly significant effect operating in the expected direction in all 14 cases. Similar results presented in the unpublished appendix would also follow if we employ OLS to estimate Panel A of Table 10.[76]

Panel C provides the *p-value* from the χ^2 over-identification test for the specification with two instruments, which serves as a general test for their overall validity. The result of the test appears to favor our identification strategy, as we fail to reject the null hypothesis even at the 10% level irrespective of the legal rules/outcomes employed. This holds when potential settler mortality is added to the instrument set for six of the seven dependent variables. This suggests that initial endowments and early European settlement may affect current legal outcomes via the colonial form of rule implemented in former British colonies.

A final check is presented in Panel D, where the European population share in 1960 is included as an exogenous control in the second stage. If the effect we are capturing represents simply the fact that those countries with a higher presence of modern-day descendants of European settlers are more likely to implant the common law than societies with more modern-day descendants of the indigenous population –that may be more adept at implementing legal practices based on native rules and customary courts– (as suggested by Berkowitz, Pistor and Richard 2003a, b), the European population share in 1960 should enter with a significantly positive coefficient and indirect rule

[76] The impact of precolonial population density working through indirect rule on current legal rules/outcomes is not trivial. For instance, if we consider the specification in column 1 (Panel A, Table 10), increasing precolonial population density one standard deviation (1.55) should reduce creditor rights by $1.55*\gamma_1*\delta_1$, where γ_1 is the effect of population density on *customary courts* and δ_1 is the effect of *customary courts* on creditor rights. Thus, the estimated effect of indigenous population density on creditor rights running through indirect rule is 1.55*9.95*(–0.05) = –0.77. Remarkably, this appears similar to the reduced-form effect of precolonial population density on creditor rights from a comparable specification (Table 2, column 5), which equals –0.76 (obtained by multiplying the standard deviation of indigenous population density times the coefficient on the interaction term between population density and the common law). This appears to support our argument that the reduced-form effect of indigenous population density on current legal institutions works through the form of rule that Britain imposed in its colonies.

should become insignificant. It is worth highlighting that the *customary courts* indicator remains highly significant for each of the seven current legal rules/outcomes, whereas the European population share in 1960 is marginally significant in only four cases (out of 14) and enters with the wrong sign. This supports the fact that if European settlement has an effect on current legal outcomes is through its impact on the colonial strategy followed, rather than directly. Of course keeping in mind that colonial legal-administrative structures were in most cases maintained after independence, which have led to the persistence of inclusive institutions in most directly ruled colonies over the postcolonial era, while extractive and clientelistic ones in indirectly ruled colonies.[77]

[77] Our cross-country evidence favoring the system of direct rule in British colonies appears in line with the within-country findings for the case of British India provided by Banerjee and Iyer (2005). They find that a cultivator-based land revenue system, where the ruler is in charge of collecting the revenue directly from cultivators, led to significantly higher agricultural investments and productivity as well as higher investments in education and health in the post-independence period than a landlord-based revenue system, in which the revenue collection is assigned to landlords. This suggests that a system of direct taxation was superior to a system of indirect taxation exercised via powerful landlords.

Table 10

Exploring the Mechanisms

Dependent variable	Creditor rights		Investor protection		Information sharing		Contract enforcement		Recovery rate		Starting a business		Registering a property	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Panel A: Two-stage Least Squares Results														
Customary court cases (% of total)	-0.053**	-0.051**	-0.046***	-0.047***	-0.050**	-0.054***	0.019***	0.017***	-0.700***	-0.717***	0.031***	0.033***	0.032***	0.034***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.21)	(0.16)	(0.01)	(0.01)	(0.01)	(0.01)
Land suitability for cultivation	1.926	2.066	-9.119	-8.710	-52.984***	-51.379***	2.248	2.766	-484.526***	-484.217***	2.770	1.953	12.748	13.891*
	(12.94)	(12.96)	(11.90)	(12.02)	(11.88)	(12.45)	(4.39)	(4.36)	(154.89)	(163.23)	(6.27)	(6.41)	(7.76)	(7.92)
Landlockedness	0.556	0.519	-1.081	-1.064	0.512	0.562	-0.346	-0.316	4.012	4.344	0.484	0.459	-0.263	-0.324
	(0.94)	(0.95)	(0.80)	(0.81)	(0.99)	(1.00)	(0.27)	(0.26)	(10.57)	(10.68)	(0.47)	(0.49)	(0.42)	(0.46)
Distance to the coast	0.246*	0.240*	0.133	0.138	0.068	0.084	-0.067*	-0.059*	2.015*	2.080*	-0.152**	-0.160**	-0.176**	-0.183**
	(0.14)	(0.13)	(0.14)	(0.14)	(0.15)	(0.14)	(0.04)	(0.03)	(1.10)	(1.06)	(0.06)	(0.06)	(0.08)	(0.08)
Gap between first sighted and colonized	0.003	0.002	0.003	0.003	-0.004	-0.004	-0.002**	-0.002**	-0.012	-0.012	-0.002	-0.002	-0.001	-0.002
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.04)	(0.04)	(0.00)	(0.00)	(0.00)	(0.00)
Panel B: First Stage	Columns 1, 3, 5, 7, 9, 11, 13								Columns 2, 4, 6, 8, 10, 12, 14					
Population density in 1500	9.948***								7.630***					
	(1.73)								(2.11)					
Euro share in 1900									-0.223*					
									(0.13)					
Land suitability for cultivation	-269.689*								-273.277*					
	(145.76)								(150.33)					
Landlockedness	29.632***								22.529*					
	(9.77)								(11.35)					
Distance to the coast	2.817**								3.317**					
	(1.27)								(1.31)					
Gap between first sighted and colonized	0.037								0.031					
	(0.04)								(0.04)					
Partial R^2	0.42								0.45					
F- statistic	33.13								19.26					
R^2	0.63								0.64					
Observations	37								36					
Panel C: Test of Overidentification	(2)		(4)		(6)		(8)		(10)		(12)		(14)	
P-value	0.764		0.804		0.525		0.295		0.807		0.406		0.498	
Panel D: Second Stage with Modern-day European Descendants as Exogenous Variable														
Customary court cases (% of total)	-0.080**	-0.083***	-0.066***	-0.069***	-0.083**	-0.088***	0.028**	0.028**	-1.108***	-1.177***	0.035***	0.036***	0.021*	0.022**
	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.01)	(0.01)	(0.37)	(0.36)	(0.01)	(0.01)	(0.01)	(0.01)
Modern-day European descendants (%)	-2.090*	-2.252*	-1.518	-1.663	-2.548	-2.724*	0.688	0.774	-31.171	-34.911*	0.285	0.265	-0.838	-0.733
	(1.22)	(1.20)	(1.07)	(1.06)	(1.55)	(1.52)	(0.55)	(0.56)	(20.04)	(20.25)	(0.54)	(0.55)	(0.66)	(0.65)
P-value (overid-test)		0.700		0.347		0.072		0.775		0.241		0.272		0.644
Observations	37	36	37	36	37	36	37	36	37	36	37	36	37	36

Note. Panel A presents the two-stage least-squares estimates with *Doing Business* indicators employed as the dependent variable. Panel B reports the corresponding first stage for the case in which precolonial population density is the only instrument for the extent of indirect rule and the case in which the instruments are precolonial population density and the European population share in 1900. Panel C reports the *p-value* associated with the overidentification test, and Panel D presents the results from the two-stage least-squares regression into which the modern-day European population share is incorporated as an exogenous variable. Regressions include a constant term which is omitted to save space. Regressions in panel D also include the following controls: land suitability, landlockedness, distance to the coast and gap between first sighted and colonized. The description of variables is provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. Small-sample correction for standard errors is applied. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.

We next provide a preliminary falsification test to show that, unlike the British, French colonial rule did not respond to the level of endowments. Since Lange's measure of the extent of indirect rule is not available for former French colonies, we employ instead the number of Africans per European administrator, with a higher value implying a more indirect form of rule. This variable is taken from Richens (2009) and is available for 33 sub-Saharan former colonies. As shown in the unpublished appendix,

initial endowments appear unrelated to the number of Africans per administrator in the French sample of colonies, whereas they appear significantly and positively related to that variable in the group of former British colonies.

Before concluding, we also test whether indirect rule worked worse in those places with fragmented and acephalous societies that lacked precolonial centralized polities – since the British granted authority to "warrant chiefs" that lacked legitimacy to their people and distorted customary law and the functioning of native courts– versus those territories with societies exhibiting centralized authority and administrative and judicial institutions –where the British could incorporate legitimate native rulers into the colonial administration structure. Toward this end, we run simple OLS regressions of current legal outcomes on the extent of indirect rule, precolonial centralization and their interaction.[78] The results reported in the unpublished appendix indicate that the negative effect of the *customary courts* indicator on current legal outcomes is reduced as the level of precolonial centralization rises, which is consistent with our arguments. This holds in the case of four of the seven legal indicators employed.[79] This result somehow allows us to reconcile the view on the adverse effects of indirect rule on postcolonial development (Lange 2004, 2009; Mamdani 1996, among others) with the view on the positive impact of having precolonial centralization versus fragmentation on subsequent development (Gennaioli and Rainer 2007; Michalopoulos and Papaioannou 2013b).

3.7. CONCLUSIONS

According to LLS (2008), four propositions are correct regarding the Legal Origins Theory: "First, legal rules and regulations differ systematically across countries [...] Second, these differences in legal rules and regulations are accounted for to a significant extent by legal origins. Third, the basic historical divergence in the styles of legal traditions [...] explains well why legal rules differ. Fourth, the measured differences in

[78] Precolonial centralization is measured through a country's percentage of population that belonged to centralized ethnic groups, as in Gennaioli and Rainer (2007). Since that measure is only provided for sub-Saharan African countries, we compute it for the remaining former British colonies using the Atlas Narodov Mira (1964) and the Ethnographic Atlas of Murdock (1967).

[79] See Richens (2009) for a similar result but for a sample of 33 sub-Saharan African colonies, with economic growth entering as the dependent variable and the number of Africans per colonial administrator measuring the extent of indirect rule.

legal rules matter for economic and social outcomes." (p. 326). This chapter qualifies points two and three. "[D]ifferences in legal rules and regulations" depend not just on legal origins but also on the way the mother country implanted the legal system in the recipient country. Incorporating this additional dimension is crucial to understand the relation between legal origins and legal rules. In fact, our results indicate that the superior performance of the common law is largely driven by countries where Britain extensively implanted its legal tradition. But in those places where the common law was hardly introduced, this legal tradition is not generally associated with better legal outcomes than the French civil law. Thus, to explain "why legal rules differ" one must consider both the contents or styles of legal traditions and the way they were distributed by the origin countries.

We argue that the process of distribution of the common law differed from that of the French civil law. The implantation of the common law was not uniform because Britain conducted a colonial strategy that did not seek to transfer its legal rules and institutions to territories politically organized and densely populated at the time of colonization, which normally had their own native rules. In contrast, France did introduce its legal system uniformly in its empire, irrespective of the initial conditions in each territory. This was due to the particular features of the French colonial empire, its centralism and bureaucratic control, and the ideology of assimilation that impregnated its colonial policy. We further argue that, by paying attention to the distribution of the French legal tradition, one can divide this legal family into three categories, depending on the way the Civil Code was received. In support of the claim that the French Civil Code was better received in Spanish American colonies than in French colonies, we generally observe that the former group enjoys higher creditor and investor rights and a more efficient legal system than the latter.

The Legal Origins Theory has deeply influenced our understanding about how to improve legal systems in order to foster financial development and promote economic activity. The pretended superiority of the common law in many areas of the legal system advocated by the extant legal origins literature has had important consequences. Policy makers in the law-making sphere imitate tools related to the common law ("the winning origin") by adopting, for instance, private micro-institutions of investor protection instead of improving existing institutions of public enforcement through securities laws

(Roe and Siegel 2009). If, as shown in this chapter, the common law does not systematically lead to better legal rules and institutions than the French civil law, then it is not clear that adopting common law tools will improve the performance and efficiency of the legal system. Additional considerations beyond formal rules need to be raised, some of them related to factors that were present when legal traditions were implanted. For example, the rigid application of the Civil Code by France led to collisions with local rules that resulted in illegitimate legal systems, whereas the empowerment of local elites in indirectly ruled British colonies led to abuse of power and perversion of traditional customs. These colonial legacies surely contribute to some extent to the fact that at least eighty percent of the population in many developing countries –particularly in Africa– resolves their disputes using traditional mechanisms outside the official legal system (Daniels, Trebilcock, and Carson 2011). Many of these problems rooted historically in the distant past are still undermining the development of legal systems in many nations. Providing a satisfactory solution to them may have more to do with adapting or improving existing rules and institutions than with imitating other legal traditions.

3.8. APPENDIX

Table A1

Definitions and Data Sources

Variable	Description	Source
Dependent Variables		
Creditor rights	The strength of legal rights index. According to the Doing Business' methodology, this index *"measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders. It includes eight aspects related to legal rights in collateral law and two aspects in bankruptcy law. A score of 1 is assigned for each of such aspects of the laws considered."* The indicator ranges from 0 to 10, with higher scores implying higher creditor rights.	Doing Business Project (2012) (www.doingbusiness.org)
Investor protection	The strength of investor protection index. According to the Doing Business' methodology, this indicator *"measures the strength of minority shareholder protections against directors' misuse of corporate assets for personal gain. It distinguishes three dimensions of investor protections: transparency of related-party transactions (extent of disclosure index), extent of liability for self-dealing (extent of director liability index) and shareholders' ability to sue officers and directors for misconduct (the ease of shareholder suits index). The strength of investor protection index averages the three indices and ranges from 0 to 10, with higher values indicating more investor protection."*	Doing Business Project (2012)
Information sharing	The depth of credit information index. According to the Doing Business' methodology, this indicator *"measures rules and practices affecting the coverage, scope and accessibility of credit information available through either a public credit registry or a private credit bureau. A score of 1 is assigned for each of the six features of the public credit registry or private credit bureau (or both)."* The indicator ranges from 0 to 6, with higher values reflecting more information available.	Doing Business Project (2012)
Contract enforcement	Time (in days) to enforce contracts. We apply the logarithmic transformation. This is a measure of the efficiency of the judicial system in resolving a commercial dispute. According to the Doing Business' methodology, it *"represents the number of calendar days counted from the moment the plaintiff decides to file the lawsuit in court until payment. This includes both the days when actions take place and the waiting periods between. The average duration of different stages of dispute resolution is recorded: the completion of service of process (time to file and serve the case), the issuance of judgment (time for the trial and obtaining the judgment) and the moment of payment (time for enforcement of the judgment)."*	Doing Business Project (2012)
Recovery rate	*"The recovery rate measures the outcome of insolvency proceedings involving domestic entities. This measure is recorded as cents on the dollar recouped by creditors through reorganization, liquidation or debt enforcement (foreclosure) proceedings. The calculation takes into account the outcome: whether the business emerges from the proceedings as a going concern or the assets are sold piecemeal. Then the costs of the proceedings are deducted (1 cent for each percentage point of the value of the debtor's estate). Finally, the value lost as a result of the time the money remains tied up in insolvency proceedings is taken into account, including the loss of value due to depreciation. The recovery rate is the present value of the remaining proceeds."* (Doing Business' methodology).	Doing Business Project (2012)
Registering a property	Number of days required to register a property. We apply the logarithmic transformation. According to the Doing Business' methodology, this variable "*captures the median duration (in calendar days) that property lawyers, notaries or registry officials indicate is necessary to complete a procedure. It is assumed that the minimum time required for each procedure is one day. Although procedures may take place simultaneously, they cannot start on the same day. It is assumed that the buyer does not waste time and commits to completing each remaining procedure without delay. If a procedure can be accelerated for an additional cost, the fastest legal procedure available and used by the majority of property owners is chosen. If procedures can be undertaken simultaneously, it is assumed that they are* ."	Doing Business Project (2012)
Starting a business	Number of days required to register a firm. We apply the logarithmic transformation. According to the Doing Business' methodology, this variable "*captures the median duration (in calendar days) that incorporation lawyers indicate is necessary in practice to complete a procedure with minimum follow-up with government agencies and no extra payments. It is assumed that the minimum time required for each procedure is one day. Although procedures may take place simultaneously, they cannot start on the same day (that is, simultaneous procedures start on consecutive days). A procedure is considered completed once the company has received the final document, such as the company registration certificate or tax number. If a procedure can be accelerated for an additional cost, the fastest procedure is chosen if that option is more beneficial to the economy's ranking."*	Doing Business Project (2012)

Table A1 (*Continued*)

Variable	Description	Source
Court system is fair, impartial and uncorrupted	Firms' assessment of whether courts are fair, impartial and uncorrupted. It ranges from 1 (strongly disagree) to 4 (strongly agree).	Enterprise Surveys (Standardized Dataset 2006-2013) (World Bank, 2013)
Availability of information on law and regulations	In general, information on the laws and regulations affecting my firm is easy to obtain: (1) fully agree, (2) agree in most cases, (3) tend to agree, (4) tend to disagree, (5) disagree in most cases, (6) fully disagree. The indicator is rescaled so that higher scores imply better legal and regulatory outcomes for the respondents.	WBES (Kaufmann and Stone, 2003)
Interpretation of law and regulations are consistent	In general, interpretation of regulations affecting my firm is consistent and predictable: (1) fully agree, (2) agree in most cases, (3) tend to agree, (4) tend to disagree, (5) disagree in most cases, (6) fully disagree. The indicator is rescaled so that higher scores imply better legal and regulatory outcomes for the respondents.	WBES (Kaufmann and Stone, 2003)
Quality and efficiency of courts	Overall quality and efficiency of the judiciary/courts:(1) very good, (2) good, (3) slightly good, (4) slightly bad, (5) bad, (6) very bad. The indicator is rescaled so that higher scores imply better legal outcomes for the respondents.	WBES (Kaufmann and Stone, 2003)
Courts are fair and impartial	In resolving business disputes, do you believe your country's courts to be fair and impartial: (1) always, (2) usually, (3) frequently, (4) sometimes, (5) seldom, (6) never. The indicator is rescaled so that higher scores imply better legal outcomes for the respondents.	WBES (Kaufmann and Stone, 2003)
Courts are honest	In resolving business disputes, do you believe your country's courts to be honest and uncorrupted: (1) always, (2) usually, (3) frequently, (4) sometimes, (5) seldom, (6) never. The indicator is rescaled so that higher scores imply better legal outcomes for the respondents.	WBES (Kaufmann and Stone, 2003)
Courts enforceability	In resolving business disputes, do you believe your country's courts to enforce decisions: (1) always, (2) usually, (3) frequently, (4) sometimes, (5) seldom, (6) never. The indicator is rescaled so that higher scores imply better legal outcomes for the respondents.	WBES (Kaufmann and Stone, 2003)
Confidence in judicial system and security	It is constructed as the average of the following variables: confidence in the police force, confidence in the judicial system, have you had money property stolen from you or another household member?, and have you been assaulted or mugged? It ranges from 0 to 1, with higher values implying greater confidence. Year 2010.	Worldwide Governance Indicators Data Sources: Gallup World Poll (Dimension of Rule of Law)
Enforcement of Gov. regulations	Government regulations are effectively enforced. It ranges from 0 to 1, with higher values implying better outcomes. World Justice Project: Rule of Law Index 2012-2013.	World Justice Project (Botero and Ponce, 2010)
No improper influence in applying Gov. regulations	Government regulations are applied and enforced without improper influence. It ranges from 0 to 1, with higher values implying better outcomes. World Justice Project: Rule of Law Index 2012-2013.	World Justice Project (Botero and Ponce, 2010)
No improper Gov. influence on civil justice	Civil justice is free of improper government influence. It ranges from 0 to 1, with higher values implying better outcomes. World Justice Project: Rule of Law Index 2012-2013.	World Justice Project (Botero and Ponce, 2010)
No unreasonable delays	Civil justice is not subject to unreasonable delays. It ranges from 0 to 1, with higher values implying better outcomes. World Justice Project: Rule of Law Index 2012-2013.	World Justice Project (Botero and Ponce, 2010)
Enforcement of civil justice	Civil justice is effectively enforced. It ranges from 0 to 1, with higher values implying better outcomes. World Justice Project: Rule of Law Index 2012-2013.	World Justice Project (Botero and Ponce, 2010)
Alternative dispute resolution mechanisms	Alternative dispute resolution mechanisms are accessible, impartial, and effective. It ranges from 0 to 1, with higher values implying better outcomes. World Justice Project: Rule of Law Index 2012-2013.	World Justice Project (Botero and Ponce, 2010)
Main Independent Variables and Controls		
Legal origin	Legal origin variable: English Common Law, French Commercial Code and Socialist/Communist Laws. We complement this variable for three countries (Cambodia, Lao PDR and Vietnam) with information from La Porta *et al.* (2008).	La Porta *et al.* (1999), from Teorell *et al.* (2011)
Colonizing country	French, British, Spanish and 'Others' former colonies. In the event that a particular colony was colonized by several colonial powers, the last one that occupied the territory is considered, provided that the domain lasts for a period of no less than 10 years. The US, Canada, Australia, New Zealand and Hong Kong are considered former colonies.	Teorell and Hadenius (2005), from Teorell et al. (2011)

Table A1 (*Continued*)

Variable	Description	Source
Population density	Logarithm of population density in 1500 (total population divided by total arable land).	AJR (2002)
Settler mortality	Logarithm of potential European settler mortality rate, measured in terms of deaths per annum per 1,000.	AJR (2001)
Years since independence	2000 minus year of independence.	Olsson (2009)
Religion	Protestants, Catholics, Muslims and others as a percentage of population in 1980.	La Porta *et al.* (1999), from Teorell *et al*. (2011)
High indigenous mortality	Dummy variable indicating whether the country belongs to the New World (North America, the Caribbean and Latin America) or Oceania, which were the territories where the contact with European colonizers caused a more dramatic decline in native population due to vulnerability to European diseases.	Own elaboration according to Easterly and Levine (2012)'s methodology
Ethnic fractionalization	Probability that two randomly selected individuals from a given country do not belong to the same ethnolinguistic group.	Alesina *et al.* (2003), from Teorell *et al.* (2011)
Gap betweem first sighted and colonized	Number of years between when a territory was first sighted by Western Europeans and when it was first colonized by a European power.	Woodberry (2004, 2012)
Land suitability for cultivation	Measure of land suitability for agriculture. It is calculated as the amount of land suitable for cultivation over total land area.	Global Land Use Database (SAGE) (Ramankutty *et al* . 2002)
Landlockedness	Dummy variable taking a value of one for countries with no direct access to the sea.	Own elaboration using ArcGIS
Distance from the coast	Distance in hundreds of kilometers from the centroid of the country to the nearest coast.	Own elaboration using ArcGIS
Ln GDP pc 1970	Real GDP per capita (Constant Prices: Chain series). Year 1970.	Heston, Summers, and Aten (2009)
Continental dummies	Continental dummies for Africa, America and Asia.	Own elaboration
Robustness Checks		
Customary courts	Ratio of colonially recognized customary court cases over the total number of court cases in 1955, with the latter comprising both customary court cases heard by native chiefs and magistrate court cases handled by British officials.	Lange (2004, 2009)
Early European settlement	European population share in 1900.	AJR (2001)
European population share in 1960	European population share in 1960.	Atlas Narodov Mira (1964)
Africans per European administrator	Number of Africans per European administrator.	Richens (2009)
Precolonial centralization	A country's percentage of population that belonged to centralized ethnic groups, as in Gennaioli and Rainer (2007).	Gennaioli and Rainer (2007), Atlas Narodov Mira and Ethnographic Atlas of Murdock (1967)

Table A2
List of Former Colonies

British Common Law		French Civil law		
Antigua and Barbuda	South Africa	**Implantation by France**	**Spanish Law legacy**	**Others**
Australia	Sri Lanka	Algeria	Argentina	Angola
Bangladesh	St. Kitts and Nevis	Benin	Bolivia	Brazil
Belize	St. Lucia	Burkina Faso	Chile	Burundi
Botswana	St. Vincent and the Gr.	Cambodia	Colombia	Cape Verde
Canada	Sudan	Cameroon	Costa Rica	Congo, Dem. Rep.
Dominica	Swaziland	Central African Rep.	Dominican Rep.	Egypt, Arab Rep.
Gambia, The	Tanzania	Chad	Ecuador	Eritrea
Ghana	Trinidad and Tobago	Comoros	Equatorial Guinea	Guinea-Bissau
Grenada	Uganda	Congo, Rep.	Guatemala	Indonesia
Guyana	United Arab Emirates	Côte d'Ivoire	Honduras	Iraq
Hong Kong	United States	Gabon	Mexico	Jordan
India	Zambia	Guinea	Nicaragua	Kuwait
Jamaica	Zimbabwe	Haiti	Panama	Mozambique
Kenya		Lao PDR	Peru	Oman
Lesotho		Lebanon	Paraguay	Philippines
Malawi		Madagascar	El Salvador	Rwanda
Malaysia		Mali	Uruguay	Suriname
Namibia		Mauritania	Venezuela, RB	Yemen, Rep.
New Zealand		Morocco		
Nigeria		Niger		
Pakistan		Senegal		
Papua New Guinea		Syrian Arab Rep.		
Sierra Leone		Togo		
Singapore		Tunisia		
		Vietnam		

3.9. UNPUBLISHED APPENDICES

INDEX:

I. Descriptive statistics.

TABLE A1- DESCRIPTIVE STATISTICS

Variable	Obs	Mean	Std. Dev.	Min	Max
Dependent Variables					
- Variables from Doing Business					
Creditor rights	114	4.71	2.43	0.00	10.00
Investor protection	114	4.76	1.64	1.70	9.70
Information sharing	114	1.99	2.07	0.00	6.00
Contract enforcement	114	6.42	0.44	4.79	7.45
Recovery rate	114	24.41	21.37	0.00	91.30
Starting a business	114	3.69	0.87	0.69	6.54
Registering a property	111	4.11	0.95	0.69	6.53
Public registry coverage	95	2.80	6.15	0.00	33.70
Private bureau coverage	95	13.73	27.29	0.00	100.00
Average between public and private coverage	93	8.26	14.71	0.00	58.55
- Variables from business and household surveys					
Court system is fair, impartial and uncorrupted	122	2.26	0.43	1.42	3.98
Availability of information on law and regulations	81	4.13	0.43	2.95	5.59
Interpretation of law and regulations consistent	81	3.71	0.49	2.76	5.24
Courts are fair and impartial	81	3.49	0.75	2.25	5.42
Quality and efficiency of courts	81	3.46	0.61	2.11	5.21
Courts are honest	81	3.39	0.83	1.90	5.56
Courts enforceability	81	3.47	0.64	2.25	5.33
Confidence in judicial system and security	155	0.67	0.12	0.41	0.98
Enforcement of Gov. regulations	97	0.52	0.15	0.22	0.88
No improper influence in applying Gov. regulatio	97	0.58	0.19	0.22	0.95
No improper Gov. influence on civil justice	97	0.58	0.16	0.10	0.90
No unreasonable delays	97	0.41	0.15	0.14	0.82
Enforcement of civil justice	97	0.50	0.17	0.20	0.87
Alternative dispute resolution mechanisms	97	0.67	0.12	0.22	0.94

TABLE A1- DESCRIPTIVE STATISTICS

Variable	Obs	Mean	Std. Dev.	Min	Max
Independent Variables and Controls					
Settler mortality	77	4.72	1.20	2.15	7.99
Population density in 1500	106	0.54	1.52	-3.83	4.61
Years since independence	123	61.58	56.52	3.00	224.00
Religion variables:					
Catholics	121	33.04	34.66	0.00	96.60
Protestants	119	13.66	18.34	0.00	76.30
Muslims	121	26.81	37.56	0.00	99.90
Other religions	119	25.75	25.35	0.00	98.00
Ethnic fractionalization	120	0.49	0.26	0.00	0.93
Ln GDP pc 1970	120	8.07	1.04	5.83	11.49
Land suitability for cultivation	100	0.05	0.03	0.00	0.13
Distance to the coast	114	2.95	3.33	0.00	14.38
Gap between sighted and colonized	113	191.80	160.50	0.00	476.00
Euro share in 1900	101	12.00	23.09	0.00	100.00
Customary court cases (% of total)	37	29.14	32.27	0.00	93.40
Modern-day European descendants (%)	39	0.29	0.42	0.00	0.96
Number of Africans per administrator	33	35503.00	35459.85	5843.00	203076.00
Precolonial centralization	107	0.46	0.41	0.00	1.00

Notes: The table only contains non-dichotomous variables.

II. Results when dependent variables correspond to averages over the period 2006-2010.

TABLE A2- RESULTS WHEN DEPENDENT VARIABLES CORRESPOND TO AVERAGES OVER THE PERIOD 2006-2010: (I) CREDITOR RIGHTS

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	-4.374***	-4.394***	-4.175***	-4.269***	-4.168***	-4.223***	-4.183***	-6.921***	-4.63***	-4.671***	-4.74***	-4.74***
	(0.352)	(0.358)	(0.397)	(0.409)	(0.457)	(0.366)	(0.393)	(1.899)	(0.343)	(0.306)	(0.312)	(0.312)
- Spanish law legacy	-3.516***	-3.793***	-3.168***	-3.703***	-3.506***	-3.554***	-3.704***	-4.161	-3.99***	-3.812***	-3.955***	-3.955***
	(0.449)	(0.571)	(0.604)	(0.479)	(0.453)	(0.456)	(0.493)	(4.579)	(0.471)	(0.421)	(0.499)	(0.499)
- Others	-4***	-4.012***	-3.51***	-3.933***	-3.837***	-3.926***	-3.979***	-1.37	-4.103***	-4.297***	-4.245***	-4.245***
	(0.362)	(0.371)	(0.453)	(0.387)	(0.393)	(0.362)	(0.376)	(1.85)	(0.364)	(0.326)	(0.349)	(0.349)
- Common law x pop. density	-0.376**	-0.36**	-0.255	-0.349**	-0.323**	-0.326**	-0.363**		-0.447***	-0.394***	-0.449***	-0.449***
	(0.151)	(0.159)	(0.17)	(0.153)	(0.151)	(0.162)	(0.149)		(0.156)	(0.135)	(0.127)	(0.127)
- Implantation by France x pop. density	0.054	0.065	0.177	0.071	-0.045	0.008	0.017		0.329	-0.093	0.086	0.086
	(0.244)	(0.251)	(0.254)	(0.249)	(0.265)	(0.261)	(0.241)		(0.253)	(0.176)	(0.078)	(0.078)
- Spanish law legacy x pop. density	0.363	0.376	0.409	0.374	0.404	0.411	0.377		1.665***	0.363	1.167*	1.167*
	(0.311)	(0.314)	(0.317)	(0.313)	(0.317)	(0.314)	(0.314)		(0.607)	(0.312)	(0.695)	(0.695)
- Others x pop. density	-0.212**	-0.207*	-0.177	-0.177*	-0.232**	-0.163	-0.176		-0.207**	-0.212**	-0.212**	-0.212**
	(0.098)	(0.106)	(0.107)	(0.103)	(0.104)	(0.111)	(0.107)		(0.096)	(0.098)	(0.098)	(0.098)
Years since independence		0.002										
		(0.003)										
Catholics			-0.007									
			(0.013)									
Muslims			-0.012									
			(0.012)									
Other religions			0.002									
			(0.015)									
High indigenous mortality				0.346								
				(0.449)								
Ethnic fractionalization					-0.543							
					(0.64)							
Ln GDP pc 1970						0.158						
						(0.176)						
America							0.432					
							(0.44)					
Asia							0.273					
							(0.438)					
- Common law x settler mortality								-0.495**				
								(0.238)				
- Implantation by France x settler mortality								0.072				
								(0.256)				
- Spanish law legacy x settler mortality								-0.348				
								(0.982)				
- Others x settler mortality								-0.986***				
								(0.28)				
Constant	7.366***	7.266***	7.643***	7.227***	7.584***	6.081***	7.147***	9.584***	7.428***	7.662***	7.61***	7.61***
	(0.29)	(0.336)	(0.954)	(0.366)	(0.376)	(1.391)	(0.341)	(1.067)	(0.296)	(0.243)	(0.273)	(0.273)
R-squared	0.68	0.68	0.69	0.69	0.68	0.68	0.69	0.66	0.7	0.8	0.77	0.77
Number of observations	103	103	101	103	101	101	103	76	94	97	95	95
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	-3.4[a]	-3.4[a]	-3.2[a]	-3.3[a]	-3.5[a]	-3.5[a]	-3.3[a]	-3.4[a]	-2.8[a]	-4.0[a]	-3.5[a]	-3.5[a]
Spanish law leg.- Common law	-1.8[a]	-2.1[a]	-1.6	-2.0[a]	-1.8[a]	-1.9[a]	-2.0[a]	-3.3	0.9	-2.1[a]	-0.2	-0.2
Others - Common law	-3.6[a]	-3.7[a]	-3.3[a]	-3.5[a]	-3.6[a]	-3.6[a]	-3.5[a]	-4.4[a]	-3.6[a]	-3.9[a]	-3.7[a]	-3.7[a]

Notes : The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A2- RESULTS WHEN DEPENDENT VARIABLES CORRESPOND TO AVERAGES OVER THE PERIOD 2006-2010: (II) INVESTOR PROTECTION

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	-2.538***	-2.607***	-2.476***	-2.436***	-2.519***	-2.196***	-2.038***	-7.166***	-2.39***	-2.547***	-2.729***	-2.84***
	(0.418)	(0.442)	(0.462)	(0.471)	(0.427)	(0.423)	(0.531)	(1.519)	(0.44)	(0.394)	(0.35)	(0.337)
- Spanish law legacy	-1.411***	-2.353***	-1.186**	-1.595***	-1.333***	-1.497***	-1.449***	-5.992*	-1.402**	-1.419***	-1.2***	-1.311***
	(0.414)	(0.523)	(0.538)	(0.411)	(0.427)	(0.412)	(0.39)	(3.182)	(0.53)	(0.39)	(0.402)	(0.39)
- Others	-1.361***	-1.404***	-1.296**	-1.296**	-1.294***	-1.478***	-1.409***	-2.764	-0.881**	-1.06***	-0.976***	-1.087***
	(0.44)	(0.425)	(0.539)	(0.493)	(0.443)	(0.456)	(0.449)	(4.576)	(0.429)	(0.325)	(0.355)	(0.342)
- Common law x pop. density	-0.355**	-0.301*	-0.33**	-0.328*	-0.307*	-0.241	-0.347**		-0.298*	-0.323**	-0.295*	-0.329**
	(0.155)	(0.156)	(0.165)	(0.165)	(0.159)	(0.153)	(0.139)		(0.172)	(0.15)	(0.156)	(0.151)
- Implantation by France x pop. density	0.266	0.304	0.203	0.283	0.295	0.161	0.064		0.126	0.266	0.404**	0.404**
	(0.213)	(0.228)	(0.242)	(0.218)	(0.231)	(0.209)	(0.25)		(0.269)	(0.213)	(0.173)	(0.173)
- Spanish law legacy x pop. density	-0.124	-0.081	-0.104	-0.113	-0.136	-0.015	-0.106		0.005	-0.124	-0.263	-0.263
	(0.221)	(0.224)	(0.227)	(0.222)	(0.229)	(0.232)	(0.223)		(0.855)	(0.221)	(0.192)	(0.192)
- Others x pop. density	-0.042	-0.022	-0.071	-0.007	-0.028	0.07	-0.012		-0.395**	-0.183	-0.183	-0.183
	(0.158)	(0.142)	(0.161)	(0.159)	(0.161)	(0.161)	(0.161)		(0.158)	(0.116)	(0.116)	(0.116)
Years since independence		0.007**										
		(0.003)										
Catholics			0									
			(0.012)									
Muslims			0.004									
			(0.011)									
Other religions			0.004									
			(0.013)									
High indigenous mortality				0.34								
				(0.432)								
Ethnic fractionalization					0.162							
					(0.625)							
Ln GDP pc 1970						0.36***						
						(0.135)						
America							0.569					
							(0.38)					
Asia							1.081***					
							(0.399)					
- Common law x settler mortality								-0.797***				
								(0.213)				
- Implantation by France x settler mortality								0.184				
								(0.203)				
- Spanish law legacy x settler mortality								0.211				
								(0.634)				
- Others x settler mortality								-0.473				
								(0.86)				
Constant	5.893***	5.555***	5.606***	5.757***	5.747***	2.968***	5.395***	9.593***	5.843***	5.901***	5.817***	5.928***
	(0.266)	(0.312)	(0.903)	(0.367)	(0.449)	(1.104)	(0.332)	(0.968)	(0.28)	(0.225)	(0.268)	(0.249)
R-squared	0.36	0.38	0.34	0.36	0.34	0.39	0.42	0.54	0.35	0.43	0.38	0.43
Number of observations	103	103	101	103	101	101	103	76	94	98	99	98
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	-1.1[a]	-1.2[a]	-1.2[a]	-1.0[a]	-1.1[a]	-1.3[a]	-1.1[a]	-1.1[a]	-1.4[a]	-1.2[a]	-1.1[a]	-1.2[a]
Spanish law leg.- Common law	-0.9	-1.8[a]	-0.7	-1.1	-0.9	-1.0	-0.9	0.3	-0.7	-1.0	-1.1	-1.2
Others - Common law	-0.6	-0.8	-0.7	-0.6	-0.7	-0.8	-0.6	-0.8	-1.1[a]	-0.7	-0.7	-0.8

Notes: The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A2- RESULTS WHEN DEPENDENT VARIABLES CORRESPOND TO AVERAGES OVER THE PERIOD 2006-2010: (III) INFORMATION SHARING

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	-1.083**	-1.282**	-1.13**	-1.269**	-0.893*	-0.642	-0.723	-4.28***	-0.933**	-0.643	-0.563	-0.563
	(0.455)	(0.486)	(0.543)	(0.514)	(0.493)	(0.423)	(0.541)	(1.453)	(0.43)	(0.421)	(0.4)	(0.4)
- Spanish law legacy	2.99***	0.247	2.918***	3.323***	2.997***	2.879***	3.525***	-3.092	2.686***	3.681***	3.549***	3.549***
	(0.469)	(0.636)	(0.772)	(0.62)	(0.487)	(0.464)	(0.627)	(2.7)	(0.628)	(0.363)	(0.377)	(0.377)
- Others	0.041	-0.083	0.089	-0.077	0.219	0.087	-0.119	-4.706	0.235	0.482	0.428	0.428
	(0.578)	(0.453)	(0.616)	(0.614)	(0.583)	(0.613)	(0.6)	(3.234)	(0.51)	(0.552)	(0.492)	(0.492)
- Common law x pop. density	-0.555***	-0.4**	-0.61***	-0.603***	-0.507**	-0.409*	-0.583***		-0.485**	-0.936***	-0.922***	-0.922***
	(0.206)	(0.187)	(0.208)	(0.203)	(0.219)	(0.211)	(0.176)		(0.225)	(0.164)	(0.159)	(0.159)
- Implantation by France x pop. density	0.324	0.434	0.162	0.293	0.232	0.189	0.048		0.198	0.324	0.039	0.039
	(0.351)	(0.36)	(0.409)	(0.359)	(0.349)	(0.293)	(0.387)		(0.293)	(0.352)	(0.286)	(0.286)
- Spanish law legacy x pop. density	0.01	0.134	0.057	-0.01	0.048	0.15	0.001		1.162	-0.25*	-0.217	-0.217
	(0.342)	(0.337)	(0.363)	(0.347)	(0.354)	(0.343)	(0.346)		(1.1)	(0.137)	(0.165)	(0.165)
- Others x pop. density	-0.116	-0.059	-0.186	-0.178	-0.129	0.023	-0.176		-0.439**	-0.116	-0.309*	-0.309*
	(0.248)	(0.153)	(0.231)	(0.259)	(0.24)	(0.262)	(0.295)		(0.21)	(0.249)	(0.178)	(0.178)
Years since independence		0.022***										
		(0.004)										
Catholics			0.018									
			(0.016)									
Muslims			0.019									
			(0.013)									
Other religions			0.025									
			(0.017)									
High indigenous mortality				-0.615								
				(0.593)								
Ethnic fractionalization					-0.507							
					(0.737)							
Ln GDP pc 1970						0.463**						
						(0.18)						
America							-0.285					
							(0.607)					
Asia							1.231**					
							(0.485)					
- Common law x settler mortality								-1.212***				
								(0.168)				
- Implantation by France x settler mortality								-0.349*				
								(0.202)				
- Spanish law legacy x settler mortality								0.17				
								(0.557)				
- Others x settler mortality								-0.165				
								(0.599)				
Constant	2.089***	1.107***	0.394	2.335***	2.294***	-1.68	1.823***	7.598***	2.027***	1.648***	1.769***	1.769***
	(0.331)	(0.365)	(1.154)	(0.414)	(0.512)	(1.479)	(0.397)	(0.81)	(0.338)	(0.28)	(0.3)	(0.3)
R-squared	0.42	0.54	0.44	0.43	0.42	0.46	0.48	0.67	0.43	0.6	0.6	0.6
Number of observations	103	103	101	103	101	101	103	76	94	98	94	94
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	0.9	0.6	0.6	0.8	0.8	0.7	0.7	1.1[a]	0.6	2.3[a]	1.7[a]	1.7[a]
Spanish law leg.- Common law	4.3[a]	1.5	4.5[a]	4.7[a]	4.3[a]	4.2[a]	4.9[a]	5.5[a]	6.5[a]	5.3[a]	5.2[a]	5.2[a]
Others - Common law	1.1	0.7	1.1	0.9	1.1	1.1	0.8	1.8[a]	0.3	2.4[a]	1.8[a]	1.8[a]

Notes: The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A2- RESULTS WHEN DEPENDENT VARIABLES CORRESPOND TO AVERAGES OVER THE PERIOD 2006-2010: (IV) CONTRACT ENFORCEMENT

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	0.164	0.157	0.133	0.206	0.152	0.127	0.176	0.691	0.252**	0.179	0.218*	0.218*
	(0.117)	(0.12)	(0.12)	(0.13)	(0.124)	(0.135)	(0.129)	(0.586)	(0.113)	(0.112)	(0.111)	(0.111)
- Spanish law legacy	0.179	0.083	0.024	0.105	0.163	0.188*	0.064	1.515	0.197	0.144	0.15	0.15
	(0.112)	(0.162)	(0.165)	(0.124)	(0.116)	(0.112)	(0.127)	(1.001)	(0.119)	(0.098)	(0.1)	(0.1)
- Others	0.265*	0.261*	0.244	0.291**	0.263*	0.325**	0.289**	2.046**	0.213	0.131	0.156	0.156
	(0.141)	(0.144)	(0.167)	(0.142)	(0.143)	(0.146)	(0.138)	(0.86)	(0.142)	(0.103)	(0.103)	(0.103)
- Common law x pop. density	0.164***	0.169***	0.155***	0.174***	0.152***	0.151***	0.171***		0.19***	0.155***	0.185***	0.185***
	(0.047)	(0.047)	(0.055)	(0.049)	(0.049)	(0.051)	(0.048)		(0.047)	(0.043)	(0.039)	(0.039)
- Implantation by France x pop. density	-0.062	-0.058	-0.045	-0.055	-0.064	-0.051	-0.04		-0.154**	-0.062	-0.108*	-0.108*
	(0.067)	(0.068)	(0.07)	(0.068)	(0.076)	(0.072)	(0.071)		(0.062)	(0.067)	(0.064)	(0.064)
- Spanish law legacy x pop. density	0.004	0.009	-0.005	0.009	0.005	-0.007	0.009		0.02	-0.025	-0.025	-0.025
	(0.058)	(0.059)	(0.064)	(0.059)	(0.06)	(0.059)	(0.059)		(0.156)	(0.048)	(0.048)	(0.048)
- Others x pop. density	-0.041	-0.039	-0.032	-0.027	-0.039	-0.053	-0.024		-0.061	-0.002	-0.009	-0.009
	(0.064)	(0.065)	(0.07)	(0.062)	(0.065)	(0.066)	(0.061)		(0.091)	(0.054)	(0.032)	(0.032)
Years since independence		0.001										
		(0.001)										
Catholics			0.003									
			(0.004)									
Muslims			0.001									
			(0.003)									
Other religions			0.001									
			(0.004)									
High indigenous mortality				0.136								
				(0.129)								
Ethnic fractionalization					-0.009							
					(0.168)							
Ln GDP pc 1970						-0.039						
						(0.049)						
America							0.155					
							(0.128)					
Asia							-0.066					
							(0.107)					
- Common law x settler mortality								0.097				
								(0.061)				
- Implantation by France x settler mortality								-0.03				
								(0.088)				
- Spanish law legacy x settler mortality								-0.207				
								(0.202)				
- Others x settler mortality								-0.262				
								(0.172)				
Constant	6.299***	6.264***	6.218***	6.244***	6.318***	6.614***	6.268***	5.895***	6.275***	6.284***	6.278***	6.278***
	(0.071)	(0.087)	(0.273)	(0.093)	(0.117)	(0.41)	(0.092)	(0.316)	(0.073)	(0.063)	(0.065)	(0.065)
R-squared	0.21	0.21	0.2	0.22	0.18	0.23	0.23	0.13	0.26	0.22	0.27	0.27
Number of observations	103	103	101	103	101	101	103	76	94	97	94	94
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	-0.4[a]	-0.4[a]	-0.3[a]	-0.3[a]	-0.3[a]	-0.3[a]	-0.3[a]	-0.1	-0.5[a]	-0.3[a]	-0.5[a]	-0.5[a]
Spanish law leg.- Common law	-0.2	-0.3	-0.3	-0.3	-0.2	-0.2	-0.3	-0.4	-0.2	-0.3	-0.3	-0.3
Others - Common law	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2	-0.4	-0.2	-0.3[a]	-0.3[a]

Notes: The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A2- RESULTS WHEN DEPENDENT VARIABLES CORRESPOND TO AVERAGES OVER THE PERIOD 2006-2010: (V) RECOVERY RATE

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	-32.014***	-32.92***	-32.849***	-31.988***	-33.976***	-24.153***	-27.041***	-49.844**	-32.583***	-34.194***	-30.006***	-30.006***
	(4.579)	(4.887)	(4.677)	(4.622)	(4.762)	(4.871)	(5.283)	(22.087)	(4.905)	(4.267)	(4.681)	(4.681)
- Spanish law legacy	-11.838**	-24.362***	-9.79	-11.884*	-10.452*	-13.815***	-9.505	-7.978	-14.371***	-16.59***	-12.889***	-12.889***
	(5.149)	(6.899)	(8.074)	(6.963)	(5.275)	(4.823)	(7.386)	(49.171)	(5.172)	(4.333)	(4.828)	(4.828)
- Others	-24.933***	-25.501***	-26.599***	-24.916***	-26.038***	-27.695***	-26.018***	-38.803	-20.713***	-30.072***	-25.884***	-25.884***
	(5.353)	(5.583)	(5.167)	(5.19)	(5.41)	(4.083)	(4.221)	(23.342)	(7.311)	(4.282)	(4.695)	(4.695)
- Common law x pop. density	-7.473***	-6.765***	-8.458***	-7.467***	-7.16***	-4.859**	-7.56***		-6.633***	-7.066***	-5.584***	-5.584***
	(1.853)	(1.794)	(2.259)	(1.989)	(2.019)	(1.851)	(1.631)		(2.047)	(1.64)	(2.047)	(2.047)
- Implantation by France x pop. density	9.18***	9.685***	6.269**	9.184***	10.86***	6.782**	6.544*		11.038***	9.18***	9.18***	9.18***
	(2.652)	(2.918)	(2.496)	(2.689)	(2.718)	(3.265)	(3.812)		(3.321)	(2.661)	(2.657)	(2.657)
- Spanish law legacy x pop. density	-1.078	-0.514	-0.974	-1.076	-1.774	1.423	-1.005		9.247	-4.202*	-2.327	-2.327
	(3.9)	(3.9)	(3.999)	(3.917)	(3.95)	(3.859)	(3.921)		(8.586)	(2.245)	(3.021)	(3.021)
- Others x pop. density	-0.378	-0.117	-1.715	-0.369	-0.02	1.841*	-0.475		-4.511	0.373	0.373	0.373
	(1.458)	(1.638)	(1.23)	(1.673)	(1.466)	(1.061)	(1.452)		(2.977)	(1.22)	(1.219)	(1.219)
Years since independence		0.1**										
		(0.047)										
Catholics			0.081									
			(0.211)									
Muslims			0.223									
			(0.182)									
Other religions			0.097									
			(0.2)									
High indigenous mortality				0.085								
				(6.584)								
Ethnic fractionalization					9.269							
					(6.616)							
Ln GDP pc 1970						8.26***						
						(1.741)						
America							2.3					
							(6.636)					
Asia							12.933***					
							(4.298)					
- Common law x settler mortality								-9.496***				
								(2.293)				
- Implantation by France x settler mortality								-3.011				
								(3.129)				
- Spanish law legacy x settler mortality								-10.838				
								(10.643)				
- Others x settler mortality								-7.417*				
								(3.82)				
Constant	39.059***	34.576***	28.949*	39.025***	33.781***	-28.106*	34.557***	84.766***	38.321***	41.24***	37.052***	37.052***
	(3.436)	(4.409)	(15.707)	(3.749)	(5.113)	(14.164)	(3.329)	(11.785)	(3.577)	(2.996)	(3.565)	(3.565)
R-squared	0.4	0.42	0.42	0.4	0.38	0.5	0.45	0.52	0.37	0.54	0.36	0.36
Number of observations	103	103	101	103	101	101	103	76	94	95	98	98
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	6.3	5.0	1.1	6.4	7.5	2.7	5.4	-9.5	8.1	3.2	4.0	4.0
Spanish law leg.- Common law	2.9	-10.0	7.4	2.8	1.9	0.7	5.6	-16.3	22.2	-10.0	-5.4	-5.4
Others - Common law	-8.6	-10.2	-11.1[a]	-8.6	-9.6	-12.3[a]	-9.7	-25.9[a]	-15.8[a]	-12.9[a]	-12.2[a]	-12.2[a]

Notes: The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A2- RESULTS WHEN DEPENDENT VARIABLES CORRESPOND TO AVERAGES OVER THE PERIOD 2006-2010: (VI) STARTING A BUSINESS

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	0.757**	0.788**	0.865***	0.679*	0.684*	0.433	0.57	1.646	0.738**	0.816***	0.758***	0.758***
	(0.31)	(0.328)	(0.311)	(0.358)	(0.36)	(0.342)	(0.39)	(1.048)	(0.337)	(0.305)	(0.257)	(0.257)
- Spanish law legacy	0.655***	1.078**	0.902***	0.795***	0.664***	0.737***	0.679***	4.441**	0.727***	0.714***	0.709***	0.709***
	(0.196)	(0.413)	(0.336)	(0.243)	(0.208)	(0.189)	(0.246)	(1.806)	(0.22)	(0.188)	(0.197)	(0.197)
- Others	1.154***	1.173***	1.403***	1.104***	1.127***	1.257***	1.17***	3.565	0.79**	1.103***	1.06***	1.06***
	(0.329)	(0.332)	(0.346)	(0.353)	(0.331)	(0.299)	(0.32)	(3.397)	(0.351)	(0.218)	(0.225)	(0.225)
- Common law x pop. density	0.22**	0.196**	0.277**	0.2**	0.208**	0.112	0.216**		0.182*	0.24***	0.194**	0.194**
	(0.09)	(0.087)	(0.108)	(0.093)	(0.098)	(0.087)	(0.086)		(0.105)	(0.07)	(0.08)	(0.08)
- Implantation by France x pop. density	-0.242	-0.259	-0.146	-0.255	-0.201	-0.143	-0.169		-0.262	-0.242	-0.237	-0.237
	(0.17)	(0.18)	(0.151)	(0.176)	(0.199)	(0.187)	(0.206)		(0.223)	(0.17)	(0.147)	(0.147)
- Spanish law legacy x pop. density	-0.049	-0.068	-0.016	-0.057	-0.066	-0.152	-0.056		-0.379	-0.049	-0.17	-0.17
	(0.127)	(0.124)	(0.129)	(0.126)	(0.131)	(0.126)	(0.126)		(0.304)	(0.127)	(0.16)	(0.16)
- Others x pop. density	-0.378***	-0.386***	-0.343***	-0.404***	-0.364***	-0.474***	-0.39***		-0.132	-0.347***	-0.347***	-0.347***
	(0.108)	(0.11)	(0.113)	(0.114)	(0.108)	(0.111)	(0.112)		(0.216)	(0.063)	(0.063)	(0.063)
Years since independence		-0.003										
		(0.003)										
Catholics			-0.007									
			(0.01)									
Muslims			-0.01									
			(0.008)									
Other religions			0									
			(0.009)									
High indigenous mortality				-0.259								
				(0.292)								
Ethnic fractionalization					0.227							
					(0.375)							
Ln GDP pc 1970						-0.341***						
						(0.098)						
America							-0.224					
							(0.296)					
Asia							-0.396*					
							(0.236)					
- Common law x settler mortality								0.279**				
								(0.114)				
- Implantation by France x settler mortality								0.019				
								(0.146)				
- Spanish law legacy x settler mortality								-0.583				
								(0.385)				
- Others x settler mortality								-0.268				
								(0.653)				
Constant	3.099***	3.251***	3.458***	3.203***	2.995***	5.869***	3.287***	1.825***	3.132***	3.04***	3.084***	3.084***
	(0.139)	(0.201)	(0.734)	(0.187)	(0.256)	(0.803)	(0.2)	(0.583)	(0.149)	(0.127)	(0.137)	(0.137)
R-squared	0.29	0.31	0.35	0.3	0.28	0.39	0.32	0.24	0.18	0.33	0.32	0.32
Number of observations	103	103	101	103	101	101	103	76	94	97	93	93
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	-0.3	-0.3	-0.1	-0.4	-0.3	-0.2	-0.3	0.0	-0.3	-0.3	-0.2	-0.2
Spanish law leg.- Common law	0.0	0.5	0.2	0.2	0.0	0.1	0.1	-0.9	-0.6	0.0	-0.1	-0.1
Others - Common law	-0.2	-0.2	0.0	-0.3	-0.2	-0.1	-0.2	0.2	0.1	-0.2	-0.2	-0.2

Notes: The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A2- RESULTS WHEN DEPENDENT VARIABLES CORRESPOND TO AVERAGES OVER THE PERIOD 2006-2010: (VII) REGISTERING A PROPERTY

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	0.735**	0.747**	0.816***	0.779**	0.686*	0.488	0.564	2.224*	0.612*	0.474*	0.395	0.395
	(0.312)	(0.318)	(0.267)	(0.322)	(0.374)	(0.304)	(0.341)	(1.152)	(0.312)	(0.24)	(0.241)	(0.241)
- Spanish law legacy	-0.027	0.143	-0.214	-0.107	0.01	0.035	-0.332	-2.052	-0.034	-0.112	-0.191	-0.191
	(0.193)	(0.432)	(0.334)	(0.258)	(0.2)	(0.203)	(0.228)	(2.148)	(0.196)	(0.169)	(0.172)	(0.172)
- Others	0.294	0.302	0.427	0.322	0.339	0.426	0.382	2.418*	0.076	0.098	-0.047	-0.047
	(0.288)	(0.29)	(0.311)	(0.287)	(0.286)	(0.292)	(0.258)	(1.301)	(0.341)	(0.265)	(0.258)	(0.258)
- Common law x pop. density	0.298***	0.288***	0.394***	0.309***	0.307***	0.216**	0.314***		0.308***	0.319***	0.282***	0.282***
	(0.083)	(0.085)	(0.083)	(0.082)	(0.087)	(0.088)	(0.086)		(0.095)	(0.066)	(0.062)	(0.062)
- Implantation by France x pop. density	-0.186	-0.193	-0.019	-0.179	-0.143	-0.111	-0.043		0	-0.098	-0.098	-0.098
	(0.17)	(0.172)	(0.166)	(0.166)	(0.214)	(0.175)	(0.169)		(0.181)	(0.149)	(0.149)	(0.149)
- Spanish law legacy x pop. density	-0.148	-0.156	-0.161	-0.143	-0.166	-0.227**	-0.142		-0.099	-0.148	-0.148	-0.148
	(0.096)	(0.099)	(0.104)	(0.097)	(0.101)	(0.109)	(0.097)		(0.248)	(0.097)	(0.097)	(0.097)
- Others x pop. density	0.075	0.071	0.153	0.09	0.099	0.011	0.111		0.282*	0.094	0.179**	0.179**
	(0.119)	(0.12)	(0.107)	(0.12)	(0.123)	(0.114)	(0.095)		(0.167)	(0.122)	(0.069)	(0.069)
Years since independence		-0.001										
		(0.003)										
Catholics			-0.002									
			(0.007)									
Muslims			-0.011*									
			(0.006)									
Other religions			-0.004									
			(0.007)									
High indigenous mortality				0.146								
				(0.268)								
Ethnic fractionalization					0.239							
					(0.397)							
Ln GDP pc 1970						-0.259**						
						(0.105)						
America							0.199					
							(0.256)					
Asia							-0.625***					
							(0.235)					
- Common law x settler mortality								0.394***				
								(0.133)				
- Implantation by France x settler mortality								-0.008				
								(0.171)				
- Spanish law legacy x settler mortality								0.817*				
								(0.459)				
- Others x settler mortality								0.028				
								(0.24)				
Constant	3.727***	3.788***	4.082***	3.668***	3.589***	5.836***	3.844***	2.18***	3.718***	3.811***	3.89***	3.89***
	(0.141)	(0.173)	(0.527)	(0.161)	(0.255)	(0.803)	(0.175)	(0.675)	(0.146)	(0.107)	(0.11)	(0.11)
R-squared	0.21	0.21	0.31	0.21	0.23	0.28	0.31	0.31	0.23	0.27	0.22	0.22
Number of observations	103	103	101	103	101	101	103	76	94	98	96	96
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	-0.4	-0.4	-0.1	-0.3	-0.4	-0.3	-0.3	-0.3	-0.1	-0.5	-0.5	-0.5
Spanish law leg.- Common law	-1.1[a]	-0.9	-1.5[a]	-1.1[a]	-1.1[a]	-1.0[a]	-1.4[a]	0.6	-1.0	-1.2[a]	-1.2[a]	-1.2[a]
Others - Common law	-0.2	-0.2	-0.1	-0.2	-0.1	0.0	-0.1	0.1	0.0	-0.4	-0.3	-0.3

Notes: The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A2.1- CONTROLLING FOR VARIABLES RELATED TO THE ECONOMIC POTENTIAL

Dependent variable:	Creditor and investor rigths and disclosure			Legal system efficiency		Regulations	
	Creditor rights	Investor protection	Information sharing	Contract enforcement	Recovery rate	Starting a business	Registering a property
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
- Common law (Ref. group)							
- Civil law groups:							
• Implantation by France	-4.208***	-2.317***	-1.293**	0.184	-31.921***	0.742**	0.985***
	(0.505)	(0.452)	(0.517)	(0.165)	(3.923)	(0.371)	(0.228)
• Spanish law legacy	-3.83***	-1.634***	2.28***	0.076	-14.508**	0.703***	-0.119
	(0.505)	(0.456)	(0.581)	(0.128)	(5.918)	(0.233)	(0.219)
• Others	-3.941***	-1.684***	-0.599	0.314**	-29.604***	1.363***	0.618**
	(0.475)	(0.521)	(0.631)	(0.149)	(5.273)	(0.373)	(0.305)
- Common law x Pop. dens.	-0.44***	-0.379**	-0.528***	0.159***	-7.01***	0.216***	0.25***
	(0.156)	(0.155)	(0.188)	(0.044)	(1.764)	(0.081)	(0.068)
- Civil law groups x Pop. dens.:							
• Implantation by France x Pop. dens.	0.018	0.097	0.755	-0.01	10.207***	-0.223	-0.184
	(0.31)	(0.284)	(0.456)	(0.102)	(2.797)	(0.215)	(0.176)
• Spanish law legacy x Pop. dens.	0.356	-0.177	-0.138	-0.017	-2.259	-0.033	-0.155
	(0.295)	(0.262)	(0.403)	(0.065)	(4.601)	(0.126)	(0.114)
• Others x Pop. dens.	-0.146	0.067	0.092	-0.037	0.397	-0.44***	0.089
	(0.134)	(0.158)	(0.24)	(0.07)	(1.599)	(0.128)	(0.114)
Land suitability for cultivation	9.401	-2.685	-12.903*	0.402	-164.374**	2.8	11.238***
	(5.782)	(5.62)	(7.72)	(1.676)	(68.853)	(3.687)	(3.3)
Distance to the coast	0.046	0.061	0.047	-0.003	0.219	-0.023	-0.036
	(0.054)	(0.065)	(0.072)	(0.015)	(0.556)	(0.033)	(0.03)
Landlocked	-0.815*	-1.651***	-1.216**	-0.057	-12.254**	0.494*	0.389**
	(0.472)	(0.513)	(0.605)	(0.141)	(5.335)	(0.291)	(0.191)
Gap between sighted and colonized	-0.001	-0.001	-0.004***	-0.001**	-0.019	0	0
	(0.001)	(0.001)	(0.001)	(0)	(0.014)	(0.001)	(0.001)
Constant	7.113***	6.321***	3.676***	6.404***	52.729***	2.882***	3.202***
	(0.683)	(0.651)	(0.808)	(0.168)	(6.125)	(0.331)	(0.344)
R-squared	0.72	0.44	0.49	0.25	0.45	0.32	0.38
Number of observations	100	100	100	100	100	100	100
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)							
Imp. by France - Common law	-3.2[a]	-1.2[a]	1.7	-0.2	7.7	-0.3	0.0
Spanish law leg.- Common law	-2.0[a]	-1.2	3.2[a]	-0.3	-3.6	0.1	-1.1[a]
Others - Common law	-3.3[a]	-0.7	0.8	-0.1	-12.5[a]	-0.1	0.2

Notes: This table presents results from estimating equation (1) for the seven dependent variables. The description of variables is provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of the table we show the differences in predicted values between the common law and each civil law category when pre-colonial population density is equal to 10 (log=2.3). [a] means that differences are significant at the 5% level.

III. Results when dependent variables correspond to year 2010.

TABLE A3- RESULTS WHEN DEPENDENT VARIABLES CORRESPOND TO YEAR 2010: (I) CREDITOR RIGHTS

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	-4.449***	-4.48***	-4.202***	-4.326***	-4.161***	-4.339***	-4.184***	-6.43***	-4.804***	-4.638***	-4.463***	-4.572***
	(0.375)	(0.379)	(0.426)	(0.417)	(0.456)	(0.4)	(0.383)	(2.027)	(0.39)	(0.308)	(0.32)	(0.307)
- Spanish law legacy	-3.358***	-3.793***	-2.993***	-3.578***	-3.369***	-3.386***	-3.578***	-1.757	-3.86***	-3.884***	-3.774***	-3.883***
	(0.513)	(0.583)	(0.664)	(0.533)	(0.522)	(0.519)	(0.542)	(5.286)	(0.512)	(0.457)	(0.528)	(0.521)
- Others	-4.016***	-4.036***	-3.36***	-3.938***	-3.805***	-3.901***	-3.997***	-3.197	-4.352***	-4.371***	-4.073***	-4.182***
	(0.367)	(0.379)	(0.482)	(0.389)	(0.399)	(0.371)	(0.379)	(2.764)	(0.404)	(0.33)	(0.36)	(0.348)
- Common law x pop. density	-0.326**	-0.301*	-0.18	-0.294*	-0.266*	-0.289*	-0.31**		-0.392**	-0.396***	-0.326**	-0.384***
	(0.148)	(0.158)	(0.167)	(0.152)	(0.147)	(0.161)	(0.146)		(0.156)	(0.146)	(0.149)	(0.142)
- Implantation by France x pop. density	0.278	0.296	0.443	0.298	0.128	0.245	0.217		0.7	-0.163	0.025	0.025
	(0.382)	(0.39)	(0.334)	(0.387)	(0.37)	(0.403)	(0.35)		(0.451)	(0.181)	(0.072)	(0.072)
- Spanish law legacy x pop. density	0.499	0.519	0.582	0.512	0.562	0.534	0.517		1.899***	0.364	1.182	1.182
	(0.356)	(0.36)	(0.364)	(0.358)	(0.36)	(0.361)	(0.36)		(0.686)	(0.325)	(0.713)	(0.714)
- Others x pop. density	-0.05	-0.041	0.003	-0.009	-0.082	-0.012	-0.006		0.259	-0.218**	-0.218**	-0.218**
	(0.183)	(0.193)	(0.185)	(0.189)	(0.185)	(0.192)	(0.197)		(0.385)	(0.106)	(0.106)	(0.106)
Years since independence		0.003										
		(0.003)										
Catholics			-0.003									
			(0.012)									
Muslims			-0.013									
			(0.012)									
Other religions			0.012									
			(0.015)									
High indigenous mortality				0.406								
				(0.443)								
Ethnic fractionalization					-0.828							
					(0.672)							
Ln GDP pc 1970						0.116						
						(0.184)						
America							0.547					
							(0.434)					
Asia							0.414					
							(0.504)					
- Common law x settler mortality								-0.435*				
								(0.226)				
- Implantation by France x settler mortality								0.022				
								(0.283)				
- Spanish law legacy x settler mortality								-0.808				
								(1.123)				
- Others x settler mortality								-0.49				
								(0.566)				
Constant	7.437***	7.281***	7.265***	7.274***	7.795***	6.497***	7.14***	9.446***	7.495***	7.735***	7.437***	7.546***
	(0.286)	(0.331)	(0.941)	(0.363)	(0.392)	(1.466)	(0.351)	(1.032)	(0.293)	(0.248)	(0.287)	(0.272)
R-squared	0.6	0.61	0.64	0.61	0.6	0.6	0.61	0.6	0.62	0.78	0.72	0.74
Number of observations	103	103	101	103	101	101	103	76	94	96	95	94
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	-3.1[a]	-3.1[a]	-2.8[a]	-3.0[a]	-3.3[a]	-3.1[a]	-3.0[a]	-3.6[a]	-2.3[a]	-4.1[a]	-3.7[a]	-3.6[a]
Spanish law leg.- Common law	-1.5	-1.9	-1.2	-1.7	-1.5	-1.5	-1.7	-4.1[a]	1.4	-2.1[a]	-0.3	-0.3
Others - Common law	-3.4[a]	-3.4[a]	-2.9[a]	-3.3[a]	-3.4[a]	-3.3[a]	-3.3[a]	-3.5[a]	-2.9[a]	-4.0[a]	-3.8[a]	-3.8[a]

Notes: The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A3- RESULTS WHEN DEPENDENT VARIABLES CORRESPOND TO YEAR 2010: (II) INVESTOR PROTECTION

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	-2.632***	-2.7***	-2.573***	-2.537***	-2.582***	-2.348***	-2.214***	-6.408***	-2.541***	-2.578***	-2.901***	-3.011***
	(0.426)	(0.451)	(0.467)	(0.476)	(0.435)	(0.432)	(0.539)	(1.867)	(0.461)	(0.405)	(0.365)	(0.352)
- Spanish law legacy	-1.251***	-2.188***	-1.094*	-1.422***	-1.182**	-1.322***	-1.294***	-6.535*	-1.23**	-1.409***	-1.325***	-1.435***
	(0.462)	(0.54)	(0.568)	(0.457)	(0.477)	(0.462)	(0.437)	(3.551)	(0.594)	(0.402)	(0.409)	(0.397)
- Others	-1.325***	-1.368***	-1.256**	-1.265**	-1.234***	-1.397***	-1.363***	-4.004	-0.989**	-1.272***	-1.027***	-1.137***
	(0.441)	(0.423)	(0.537)	(0.49)	(0.444)	(0.462)	(0.455)	(4.642)	(0.439)	(0.421)	(0.363)	(0.349)
- Common law x pop. density	-0.368**	-0.315**	-0.339**	-0.343**	-0.318**	-0.273*	-0.361**		-0.315*	-0.366**	-0.368**	-0.398***
	(0.152)	(0.154)	(0.161)	(0.162)	(0.155)	(0.152)	(0.14)		(0.169)	(0.15)	(0.152)	(0.148)
- Implantation by France x pop. density	0.4*	0.438*	0.351	0.416*	0.41	0.314	0.234		0.337	0.4*	0.54**	0.54**
	(0.236)	(0.252)	(0.258)	(0.241)	(0.251)	(0.235)	(0.294)		(0.326)	(0.237)	(0.205)	(0.205)
- Spanish law legacy x pop. density	-0.046	-0.004	-0.029	-0.036	-0.05	0.044	-0.031		0.037	-0.048	-0.184	-0.184
	(0.239)	(0.241)	(0.246)	(0.24)	(0.25)	(0.247)	(0.24)		(0.93)	(0.245)	(0.198)	(0.198)
- Others x pop. density	0.075	0.095	0.053	0.107	0.085	0.17	0.102		-0.089	0.075	-0.061	-0.061
	(0.166)	(0.154)	(0.177)	(0.167)	(0.169)	(0.176)	(0.176)		(0.286)	(0.166)	(0.125)	(0.125)
Years since independence		0.007**										
		(0.003)										
Catholics			0.002									
			(0.012)									
Muslims			0.004									
			(0.011)									
Other religions			0.005									
			(0.013)									
High indigenous mortality				0.315								
				(0.428)								
Ethnic fractionalization					0.054							
					(0.656)							
Ln GDP pc 1970						0.298**						
						(0.137)						
America							0.49					
							(0.384)					
Asia							0.896**					
							(0.409)					
- Common law x settler mortality								-0.779***				
								(0.213)				
- Implantation by France x settler mortality								0.077				
								(0.267)				
- Spanish law legacy x settler mortality								0.393				
								(0.701)				
- Others x settler mortality								-0.136				
								(0.883)				
Constant	5.938***	5.602***	5.594***	5.811***	5.846***	3.512***	5.519***	9.544***	5.891***	5.884***	5.938***	6.048***
	(0.263)	(0.308)	(0.9)	(0.363)	(0.459)	(1.114)	(0.338)	(0.97)	(0.277)	(0.228)	(0.264)	(0.245)
R-squared	0.33	0.35	0.31	0.33	0.3	0.35	0.37	0.47	0.31	0.38	0.38	0.43
Number of observations	103	103	101	103	101	101	103	76	94	99	99	98
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	-0.9	-1.0	-1.0	-0.8	-0.9	-1.0[a]	-0.8	-1.1[a]	-1.0	-0.8	-0.8	-0.9
Spanish law leg.- Common law	-0.5	-1.5	-0.4	-0.7	-0.6	-0.6	-0.5	0.7	-0.4	-0.7	-0.9	-0.9
Others - Common law	-0.3	-0.4	-0.4	-0.2	-0.3	-0.4	-0.3	0.0	-0.5	-0.3	-0.3	-0.4

Notes: The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A3- RESULTS WHEN DEPENDENT VARIABLES CORRESPOND TO YEAR 2010: (III) INFORMATION SHARING

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	-1.358***	-1.566***	-1.392**	-1.583***	-1.226**	-0.875*	-1.019*	-2.645	-1.309***	-1.031**	-1.022**	-1.022**
	(0.491)	(0.533)	(0.591)	(0.553)	(0.544)	(0.468)	(0.596)	(2.329)	(0.49)	(0.471)	(0.462)	(0.462)
- Spanish law legacy	2.96***	0.092	3.161***	3.364***	2.98***	2.839***	3.558***	-2.697	2.547***	3.588***	3.528***	3.528***
	(0.517)	(0.709)	(0.812)	(0.675)	(0.535)	(0.514)	(0.686)	(2.686)	(0.701)	(0.405)	(0.413)	(0.413)
- Others	-0.052	-0.183	0.044	-0.196	0.041	-0.072	-0.225	-2.766	0.157	0.335	0.029	0.029
	(0.615)	(0.478)	(0.66)	(0.657)	(0.632)	(0.658)	(0.635)	(4.169)	(0.568)	(0.582)	(0.567)	(0.567)
- Common law x pop. density	-0.519**	-0.357*	-0.597***	-0.577***	-0.478**	-0.358	-0.551***		-0.451*	-0.771***	-0.916***	-0.916***
	(0.216)	(0.199)	(0.22)	(0.213)	(0.23)	(0.223)	(0.186)		(0.236)	(0.2)	(0.156)	(0.156)
- Implantation by France x pop. density	0.61	0.726	0.386	0.573	0.554	0.463	0.329		0.626	0.61	0.626	0.626
	(0.423)	(0.439)	(0.481)	(0.431)	(0.434)	(0.378)	(0.492)		(0.45)	(0.424)	(0.45)	(0.45)
- Spanish law legacy x pop. density	0.146	0.275	0.21	0.122	0.17	0.3	0.134		1.64	-0.165	0.056	0.056
	(0.41)	(0.408)	(0.429)	(0.415)	(0.424)	(0.414)	(0.414)		(1.257)	(0.137)	(0.397)	(0.397)
- Others x pop. density	0.045	0.105	-0.062	-0.03	0.031	0.185	-0.025		-0.369*	-0.267	-0.068	-0.068
	(0.321)	(0.226)	(0.307)	(0.34)	(0.319)	(0.339)	(0.378)		(0.216)	(0.244)	(0.213)	(0.213)
Years since independence		0.023***										
		(0.005)										
Catholics			0.014									
			(0.017)									
Muslims			0.021									
			(0.014)									
Other religions			0.024									
			(0.018)									
High indigenous mortality				-0.746								
				(0.634)								
Ethnic fractionalization					-0.311							
					(0.825)							
Ln GDP pc 1970						0.507**						
						(0.201)						
America							-0.386					
							(0.653)					
Asia							1.234**					
							(0.545)					
- Common law x settler mortality								-1.219***				
								(0.166)				
- Implantation by France x settler mortality								-0.627*				
								(0.364)				
- Spanish law legacy x settler mortality								0.08				
								(0.536)				
- Others x settler mortality								-0.518				
								(0.777)				
Constant	2.269***	1.242***	0.656	2.568***	2.38***	-1.855	2.035***	7.753***	2.209***	1.942***	1.922***	1.922***
	(0.352)	(0.391)	(1.22)	(0.441)	(0.554)	(1.639)	(0.429)	(0.817)	(0.359)	(0.323)	(0.32)	(0.32)
R-squared	0.36	0.47	0.38	0.37	0.36	0.39	0.41	0.59	0.38	0.52	0.53	0.53
Number of observations	103	103	101	103	101	101	103	76	94	98	93	93
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	1.2	0.9	0.9	1.1	1.1	1.0	1.0	1.0[a]	1.2	2.2[a]	2.5[a]	2.5[a]
Spanish law leg.- Common law	4.5[a]	1.5	5.0[a]	5.0[a]	4.5[a]	4.4[a]	5.1[a]	5.4[a]	7.4[a]	5.0[a]	5.8[a]	5.8[a]
Others - Common law	1.2	0.9	1.3	1.1	1.2	1.2	1.0	1.6	0.3	1.5[a]	2.0[a]	2.0[a]

Notes: The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A3- RESULTS WHEN DEPENDENT VARIABLES CORRESPOND TO YEAR 2010: (IV) CONTRACT ENFORCEMENT

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	0.155	0.148	0.129	0.199	0.157	0.13	0.186	0.65	0.242**	0.149	0.182	0.182
	(0.115)	(0.119)	(0.117)	(0.125)	(0.124)	(0.131)	(0.127)	(0.566)	(0.111)	(0.112)	(0.111)	(0.111)
- Spanish law legacy	0.173	0.079	0.011	0.094	0.162	0.179	0.053	1.409	0.192	0.117	0.118	0.118
	(0.111)	(0.161)	(0.166)	(0.124)	(0.115)	(0.111)	(0.127)	(1.037)	(0.117)	(0.098)	(0.1)	(0.1)
- Others	0.253*	0.249*	0.235	0.281**	0.261*	0.308**	0.276**	1.889**	0.186	0.106	0.115	0.115
	(0.139)	(0.142)	(0.168)	(0.138)	(0.142)	(0.146)	(0.135)	(0.919)	(0.135)	(0.102)	(0.1)	(0.1)
- Common law x pop. density	0.16***	0.165***	0.158***	0.171***	0.154***	0.151***	0.167***		0.186***	0.138***	0.163***	0.163***
	(0.043)	(0.042)	(0.051)	(0.044)	(0.046)	(0.047)	(0.044)		(0.042)	(0.04)	(0.038)	(0.038)
- Implantation by France x pop. density	-0.055	-0.051	-0.035	-0.048	-0.062	-0.048	-0.041		-0.146**	-0.055	-0.101	-0.101
	(0.066)	(0.067)	(0.068)	(0.068)	(0.077)	(0.071)	(0.07)		(0.062)	(0.067)	(0.064)	(0.064)
- Spanish law legacy x pop. density	-0.001	0.003	-0.012	0.003	0.001	-0.009	0.004		0.011	-0.031	-0.031	-0.031
	(0.058)	(0.059)	(0.064)	(0.059)	(0.059)	(0.06)	(0.059)		(0.154)	(0.048)	(0.048)	(0.048)
- Others x pop. density	-0.034	-0.032	-0.023	-0.019	-0.034	-0.043	-0.015		-0.042	0.048	0.012	0.012
	(0.068)	(0.069)	(0.074)	(0.065)	(0.068)	(0.068)	(0.064)		(0.112)	(0.038)	(0.038)	(0.038)
Years since independence		0.001										
		(0.001)										
Catholics			0.003									
			(0.004)									
Muslims			0									
			(0.003)									
Other religions			0									
			(0.004)									
High indigenous mortality				0.146								
				(0.121)								
Ethnic fractionalization					-0.039							
					(0.171)							
Ln GDP pc 1970						-0.026						
						(0.048)						
America							0.181					
							(0.123)					
Asia							-0.026					
							(0.105)					
- Common law x settler mortality								0.074				
								(0.061)				
- Implantation by France x settler mortality								-0.043				
								(0.084)				
- Spanish law legacy x settler mortality								-0.209				
								(0.211)				
- Others x settler mortality								-0.252				
								(0.188)				
Constant	6.295***	6.261***	6.219***	6.236***	6.322***	6.507***	6.244***	6***	6.272***	6.3***	6.3***	6.3***
	(0.067)	(0.079)	(0.261)	(0.084)	(0.113)	(0.396)	(0.087)	(0.311)	(0.067)	(0.061)	(0.064)	(0.064)
R-squared	0.2	0.21	0.2	0.22	0.18	0.22	0.23	0.12	0.25	0.2	0.22	0.22
Number of observations	103	103	101	103	101	101	103	76	94	97	95	95
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	-0.3[a]	-0.4[a]	-0.3[a]	-0.3[a]	-0.3[a]	-0.3[a]	-0.3	-0.1	-0.5[a]	-0.3[a]	-0.4[a]	-0.4[a]
Spanish law leg.- Common law	-0.2	-0.3	-0.4	-0.3	-0.2	-0.2	-0.3	-0.3	-0.2	-0.3	-0.3	-0.3
Others - Common law	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.3	-0.1	-0.2	-0.2

Notes: The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A3- RESULTS WHEN DEPENDENT VARIABLES CORRESPOND TO YEAR 2010: (V) RECOVERY RATE

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	-31.404***	-32.308***	-32.267***	-31.336***	-33.438***	-23.838***	-26.737***	-50.947**	-32.101***	-33.576***	-29.423***	-29.423***
	(4.674)	(5.002)	(4.608)	(4.722)	(4.858)	(4.943)	(5.351)	(22.442)	(4.995)	(4.359)	(4.772)	(4.772)
- Spanish law legacy	-11.494**	-23.976***	-9.7	-11.616*	-10.09*	-13.397***	-9.324	-9.251	-13.804***	-16.193***	-12.692***	-12.692***
	(5.055)	(6.814)	(8.094)	(6.905)	(5.196)	(4.754)	(7.361)	(47.22)	(5.066)	(4.22)	(4.703)	(4.703)
- Others	-23.919***	-24.485***	-25.619***	-23.875***	-25.039***	-26.508***	-24.933***	-37.467	-20.145***	-28.974***	-24.822***	-24.822***
	(5.275)	(5.416)	(5.135)	(5.117)	(5.335)	(4.13)	(4.241)	(22.737)	(7.221)	(4.243)	(4.667)	(4.667)
- Common law x pop. density	-7.531***	-6.825***	-8.502***	-7.513***	-7.224***	-5.015***	-7.611***		-6.713***	-7.131***	-5.67***	-5.67***
	(1.815)	(1.764)	(2.229)	(1.961)	(1.976)	(1.827)	(1.619)		(2.009)	(1.596)	(2.003)	(2.003)
- Implantation by France x pop. density	9.211***	9.715***	6.349**	9.222***	10.936***	6.903**	6.742*		11.221***	9.211***	9.211***	9.211***
	(2.72)	(2.995)	(2.499)	(2.758)	(2.805)	(3.297)	(3.81)		(3.379)	(2.73)	(2.726)	(2.726)
- Spanish law legacy x pop. density	-0.85	-0.288	-0.774	-0.843	-1.564	1.558	-0.781		8.708	-3.921	-1.411	-1.411
	(3.994)	(4.006)	(4.084)	(4.01)	(4.056)	(4.038)	(4.017)		(8.661)	(2.547)	(2.782)	(2.782)
- Others x pop. density	-0.729	-0.47	-2.043	-0.707	-0.355	1.397	-0.818		-4.638	0.003	0.003	0.003
	(1.46)	(1.551)	(1.233)	(1.672)	(1.491)	(1.132)	(1.493)		(2.966)	(1.261)	(1.26)	(1.26)
Years since independence		0.099**										
		(0.047)										
Catholics			0.083									
			(0.212)									
Muslims			0.221									
			(0.183)									
Other religions			0.094									
			(0.2)									
High indigenous mortality				0.226								
				(6.581)								
Ethnic fractionalization					9.515							
					(6.59)							
Ln GDP pc 1970						7.951***						
						(1.74)						
America							2.184					
							(6.674)					
Asia							12.121***					
							(4.274)					
- Common law x settler mortality								-9.31***				
								(2.309)				
- Implantation by France x settler mortality								-2.491				
								(3.209)				
- Spanish law legacy x settler mortality								-10.237				
								(10.171)				
- Others x settler mortality								-7.24*				
								(3.696)				
Constant	39.011***	34.543***	29*	38.92***	33.611***	-25.645*	34.782***	83.684***	38.293***	41.182***	37.029***	37.029***
	(3.403)	(4.395)	(15.739)	(3.714)	(5.092)	(14.137)	(3.332)	(11.868)	(3.545)	(2.942)	(3.53)	(3.53)
R-squared	0.39	0.42	0.41	0.39	0.38	0.49	0.44	0.49	0.37	0.53	0.36	0.36
Number of observations	103	103	101	103	101	101	103	76	94	95	98	98
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	7.1	5.8	1.9	7.2	8.4	3.6	6.3	-8.6	9.2	4.1	4.8	4.8
Spanish law leg.- Common law	3.9	-8.9	8.1	3.7	2.9	1.7	6.4	-15.0	21.7	-8.8	-2.9	-2.9
Others - Common law	-8.3	-9.9	-10.7[a]	-8.2	-9.2	-11.7[a]	-9.3	-24.6[a]	-15.4[a]	-12.5[a]	-11.8[a]	-11.8[a]

Notes: The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A3- RESULTS WHEN DEPENDENT VARIABLES CORRESPOND TO YEAR 2010: (VI) STARTING A BUSINESS

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	0.787*	0.817*	0.904**	0.734	0.687	0.493	0.604	2.641*	0.697	0.715*	0.953***	0.953***
	(0.42)	(0.438)	(0.4)	(0.453)	(0.462)	(0.448)	(0.476)	(1.322)	(0.447)	(0.416)	(0.348)	(0.348)
- Spanish law legacy	0.608***	1.032**	0.835**	0.703**	0.614**	0.682***	0.526*	4.833**	0.705***	0.537**	0.538**	0.538**
	(0.228)	(0.481)	(0.366)	(0.296)	(0.238)	(0.225)	(0.279)	(2.281)	(0.25)	(0.219)	(0.218)	(0.218)
- Others	1.061***	1.08***	1.311***	1.027***	1.048***	1.163***	1.1***	3.615	0.703*	0.813***	0.886***	0.886***
	(0.36)	(0.364)	(0.369)	(0.379)	(0.361)	(0.352)	(0.347)	(4.116)	(0.381)	(0.272)	(0.288)	(0.288)
- Common law x pop. density	0.231***	0.207**	0.3***	0.217**	0.211**	0.133	0.234***		0.214**	0.204**	0.146*	0.146*
	(0.084)	(0.085)	(0.101)	(0.09)	(0.09)	(0.082)	(0.079)		(0.101)	(0.086)	(0.087)	(0.087)
- Implantation by France x pop. density	-0.302	-0.319	-0.169	-0.31	-0.249	-0.212	-0.206		-0.195	-0.302	-0.464**	-0.464**
	(0.228)	(0.236)	(0.212)	(0.232)	(0.256)	(0.239)	(0.248)		(0.28)	(0.229)	(0.19)	(0.19)
- Spanish law legacy x pop. density	-0.2	-0.219	-0.172	-0.205	-0.222	-0.293*	-0.203		-0.552	-0.2	-0.379**	-0.379**
	(0.175)	(0.171)	(0.174)	(0.174)	(0.179)	(0.168)	(0.175)		(0.378)	(0.175)	(0.182)	(0.182)
- Others x pop. density	-0.426***	-0.434***	-0.374***	-0.443***	-0.402***	-0.505***	-0.422***		-0.201	-0.377***	-0.291***	-0.291***
	(0.131)	(0.134)	(0.141)	(0.135)	(0.132)	(0.14)	(0.138)		(0.28)	(0.096)	(0.098)	(0.098)
Years since independence		-0.003										
		(0.003)										
Catholics			-0.009									
			(0.01)									
Muslims			-0.013									
			(0.009)									
Other religions			-0.003									
			(0.009)									
High indigenous mortality				-0.175								
				(0.327)								
Ethnic fractionalization					0.291							
					(0.413)							
Ln GDP pc 1970						-0.309***						
						(0.109)						
America							-0.088					
							(0.318)					
Asia							-0.473*					
							(0.272)					
- Common law x settler mortality								0.326**				
								(0.135)				
- Implantation by France x settler mortality								-0.123				
								(0.204)				
- Spanish law legacy x settler mortality								-0.636				
								(0.489)				
- Others x settler mortality								-0.276				
								(0.798)				
Constant	2.924***	3.076***	3.492***	2.995***	2.797***	5.435***	3.09***	1.439**	2.939***	2.996***	3.052***	3.052***
	(0.149)	(0.214)	(0.759)	(0.197)	(0.281)	(0.872)	(0.216)	(0.678)	(0.162)	(0.135)	(0.137)	(0.137)
R-squared	0.24	0.25	0.3	0.24	0.23	0.3	0.27	0.18	0.14	0.22	0.22	0.22
Number of observations	103	103	101	103	101	101	103	76	94	99	94	94
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	-0.4	-0.4	-0.2	-0.5	-0.4	-0.3	-0.4	-0.1	-0.2	-0.5	-0.5	-0.5
Spanish law leg.- Common law	-0.4	0.1	-0.3	-0.3	-0.4	-0.3	-0.5	-1.1	-1.1	-0.4	-0.7	-0.7
Others - Common law	-0.5	-0.4	-0.2	-0.5	-0.4	-0.3	-0.4	-0.1	-0.3	-0.5	-0.1	-0.1

Notes: The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A3- RESULTS WHEN DEPENDENT VARIABLES CORRESPOND TO YEAR 2010: (VII) REGISTERING A PROPERTY

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	0.644**	0.664**	0.725***	0.678**	0.61*	0.423	0.496	2.184*	0.517*	0.522*	0.256	0.256
	(0.291)	(0.305)	(0.253)	(0.3)	(0.345)	(0.284)	(0.318)	(1.132)	(0.288)	(0.27)	(0.224)	(0.224)
- Spanish law legacy	-0.12	0.154	-0.251	-0.181	-0.082	-0.065	-0.402*	-2.017	-0.125	-0.202	-0.285	-0.285
	(0.202)	(0.417)	(0.319)	(0.261)	(0.21)	(0.211)	(0.228)	(2.563)	(0.204)	(0.18)	(0.182)	(0.182)
- Others	0.235	0.248	0.354	0.257	0.279	0.338	0.315	1.274	0.075	0.153	-0.093	-0.093
	(0.278)	(0.274)	(0.303)	(0.278)	(0.276)	(0.285)	(0.255)	(1.813)	(0.312)	(0.262)	(0.24)	(0.24)
- Common law x pop. density	0.273***	0.258***	0.361***	0.282***	0.287***	0.2**	0.288***		0.28***	0.293***	0.252***	0.252***
	(0.082)	(0.082)	(0.081)	(0.081)	(0.083)	(0.085)	(0.084)		(0.094)	(0.066)	(0.06)	(0.06)
- Implantation by France x pop. density	-0.18	-0.191	-0.037	-0.174	-0.143	-0.112	-0.052		0.009	-0.202	-0.007	-0.007
	(0.161)	(0.166)	(0.159)	(0.158)	(0.201)	(0.169)	(0.16)		(0.163)	(0.153)	(0.143)	(0.143)
- Spanish law legacy x pop. density	-0.209*	-0.221**	-0.218*	-0.205*	-0.224**	-0.279**	-0.203*		-0.177	-0.209*	-0.209*	-0.209*
	(0.106)	(0.109)	(0.112)	(0.107)	(0.109)	(0.118)	(0.107)		(0.279)	(0.106)	(0.106)	(0.106)
- Others x pop. density	-0.011	-0.017	0.056	0	0.009	-0.068	0.022		0.13	-0.011	0.122**	0.122**
	(0.098)	(0.096)	(0.091)	(0.098)	(0.101)	(0.095)	(0.081)		(0.126)	(0.098)	(0.06)	(0.06)
Years since independence		-0.002										
		(0.003)										
Catholics			-0.002									
			(0.007)									
Muslims			-0.01									
			(0.006)									
Other religions			-0.004									
			(0.007)									
High indigenous mortality				0.112								
				(0.261)								
Ethnic fractionalization					0.202							
					(0.369)							
Ln GDP pc 1970						-0.232**						
						(0.104)						
America							0.193					
							(0.243)					
Asia							-0.554**					
							(0.229)					
- Common law x settler mortality								0.369**				
								(0.139)				
- Implantation by France x settler mortality								-0.035				
								(0.166)				
- Spanish law legacy x settler mortality								0.765				
								(0.557)				
- Others x settler mortality								0.152				
								(0.33)				
Constant	3.705***	3.804***	4.027***	3.661***	3.582***	5.591***	3.804***	2.255***	3.699***	3.787***	3.87***	3.87***
	(0.142)	(0.169)	(0.521)	(0.158)	(0.242)	(0.795)	(0.173)	(0.688)	(0.147)	(0.108)	(0.111)	(0.111)
R-squared	0.19	0.2	0.27	0.19	0.2	0.25	0.27	0.24	0.2	0.25	0.21	0.21
Number of observations	103	103	101	103	101	101	103	76	94	99	96	96
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	-0.4	-0.4	-0.2	-0.4	-0.4	-0.3	-0.3	-0.3	-0.1	-0.6[a]	-0.3	-0.3
Spanish law leg.- Common law	-1.2[a]	-0.9	-1.6[a]	-1.3[a]	-1.3[a]	-1.2[a]	-1.5[a]	0.4	-1.2	-1.4[a]	-1.3[a]	-1.3[a]
Others - Common law	-0.4	-0.4	-0.3	-0.4	-0.4	-0.3	-0.3	-0.1	-0.3	-0.5[a]	-0.4	-0.4

Notes: The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A3.1- CONTROLLING FOR VARIABLES RELATED TO THE ECONOMIC POTENTIAL

Dependent variable:	Creditor and investor rigths and disclosure			Legal system efficiency		Regulations	
	Creditor rights	Investor protection	Information sharing	Contract enforcement	Recovery rate	Starting a business	Registering a property
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
- Common law (Ref. group)							
- Civil law groups:							
• Implantation by France	-4.296***	-2.512***	-1.573***	0.194	-31.666***	0.83*	0.928***
	(0.516)	(0.477)	(0.591)	(0.16)	(3.909)	(0.475)	(0.216)
• Spanish law legacy	-3.768***	-1.532***	2.335***	0.075	-13.909**	0.682**	-0.159
	(0.556)	(0.493)	(0.642)	(0.126)	(5.838)	(0.272)	(0.226)
• Others	-3.824***	-1.624***	-0.672	0.311**	-28.102***	1.327***	0.549*
	(0.502)	(0.529)	(0.684)	(0.149)	(5.181)	(0.397)	(0.296)
- Common law x Pop. dens.	-0.415***	-0.392**	-0.479**	0.153***	-7.088***	0.219***	0.229***
	(0.152)	(0.158)	(0.197)	(0.041)	(1.736)	(0.079)	(0.065)
- Civil law groups x Pop. dens.:							
• Implantation by France x Pop. dens.	0.335	0.336	0.996*	-0.016	10.42***	-0.335	-0.233
	(0.439)	(0.316)	(0.534)	(0.101)	(2.793)	(0.273)	(0.167)
• Spanish law legacy x Pop. dens.	0.516	-0.089	0	-0.023	-1.845	-0.177	-0.217*
	(0.339)	(0.278)	(0.485)	(0.064)	(4.843)	(0.171)	(0.126)
• Others x Pop. dens.	0.029	0.184	0.21	-0.029	-0.101	-0.497***	-0.005
	(0.189)	(0.182)	(0.313)	(0.073)	(1.561)	(0.144)	(0.099)
Land suitability for cultivation	15.43**	-1.936	-15.427*	0.787	-153.089**	4.136	10.421***
	(6.479)	(5.921)	(8.503)	(1.666)	(68.573)	(4.383)	(3.194)
Distance to the coast	0.074	0.074	0.037	-0.005	0.32	-0.018	-0.043
	(0.06)	(0.068)	(0.08)	(0.015)	(0.546)	(0.039)	(0.03)
Landlocked	-0.838	-1.552***	-1.149*	-0.064	-11.661**	0.373	0.379*
	(0.509)	(0.53)	(0.664)	(0.139)	(5.285)	(0.332)	(0.191)
Gap between sighted and colonized	-0.001	-0.001	-0.004**	-0.001*	-0.018	0.001	0
	(0.001)	(0.001)	(0.002)	(0)	(0.014)	(0.001)	(0.001)
Constant	6.861***	6.342***	3.93***	6.376***	51.408***	2.596***	3.189***
	(0.707)	(0.665)	(0.889)	(0.163)	(6.079)	(0.433)	(0.342)
R-squared	0.65	0.39	0.42	0.25	0.45	0.27	0.35
Number of observations	100	100	100	100	100	100	100
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)							
Imp. by France - Common law	-2.6[a]	-0.8	1.8	-0.2	8.6	-0.4	-0.1
Spanish law leg.- Common law	-1.6	-0.8	3.4[a]	-0.3	-1.8	-0.2	-1.2[a]
Others - Common law	-2.8[a]	-0.3	0.9	-0.1	-12.0[a]	-0.3	0.0

Notes: This table presents results from estimating equation (1) for the seven dependent variables. The description of variables is provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of the table we show the differences in predicted values between the common law and each civil law category when pre-colonial population density is equal to 10 (log=2.3). [a] means that differences are significant at the 5% level.

IV. Results with settler mortality as endowments indicator.

TABLE A4- RESULTS WITH SETTLER MORTALITY AS ENDOWMENTS INDICATOR: (I) CREDITOR RIGHTS

	Basic regression	**Control variables**						**Outliers**			
								Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Implantation by France	-7.297***	-7.339***	-5.793***	-7.464***	-7.087***	-7.181***	-7.463***	-6.264***	-9.415***	-6.641***	-6.641***
	(1.745)	(1.807)	(1.918)	(1.788)	(1.737)	(1.907)	(1.746)	(1.598)	(1.279)	(1.328)	(1.328)
- Spanish law legacy	-6.954	-6.858	-5.75	-6.867	-6.716	-7.338*	-7.069	-2.835	-8.451*	-3.446	-3.446
	(4.301)	(4.325)	(4.326)	(4.333)	(4.372)	(4.259)	(4.455)	(3.773)	(4.239)	(2.626)	(2.626)
- Others	-0.488	-0.483	0.302	-0.25	-0.153	-0.93	-0.365	-5.575***	-1.984	-3.053*	-3.053*
	(1.809)	(1.767)	(1.786)	(1.787)	(1.898)	(1.745)	(1.988)	(1.298)	(1.607)	(1.751)	(1.751)
- Common law x settler mortality	-0.525**	-0.539*	-0.388	-0.554**	-0.452*	-0.346	-0.622**	-0.763***	-0.836***	-0.763***	-0.763***
	(0.252)	(0.274)	(0.268)	(0.258)	(0.267)	(0.293)	(0.293)	(0.173)	(0.14)	(0.172)	(0.172)
- Implantation by France x settler mortality	0.13	0.125	0.029	0.12	0.166	0.29	0.04	-0.197	0.216	-0.125	-0.125
	(0.222)	(0.229)	(0.228)	(0.227)	(0.233)	(0.281)	(0.2)	(0.221)	(0.179)	(0.157)	(0.157)
- Spanish law legacy x settler mortality	0.226	0.224	0.255	0.226	0.249	0.449	0.226	-0.928	0.226	-0.786	-0.786
	(0.922)	(0.93)	(0.919)	(0.929)	(0.941)	(0.935)	(0.936)	(0.818)	(0.927)	(0.502)	(0.502)
- Others x settler mortality	-1.199***	-1.213***	-1.169***	-1.284***	-1.188***	-0.903***	-1.344***	-0.402*	-1.199***	-0.875***	-0.875***
	(0.272)	(0.265)	(0.256)	(0.31)	(0.282)	(0.332)	(0.303)	(0.21)	(0.273)	(0.293)	(0.293)
Years since independence		-0.001									
		(0.004)									
Catholics			-0.018								
			(0.017)								
Muslims			-0.017								
			(0.014)								
Other religions			-0.007								
			(0.019)								
High indigenous mortality				-0.321							
				(0.628)							
Ethnic fractionalization					-0.309						
					(0.813)						
Ln GDP pc 1970						0.424					
						(0.29)					
America							-0.628				
							(0.705)				
Asia							-0.439				
							(0.811)				
Constant	9.543***	9.665***	9.884***	9.777***	9.333***	5.361	10.286***	10.388***	11.04***	10.388***	10.388***
	(1.118)	(1.359)	(1.448)	(1.228)	(1.183)	(3.348)	(1.526)	(0.87)	(0.736)	(0.867)	(0.867)
R-squared	0.68	0.68	0.68	0.68	0.66	0.69	0.68	0.7	0.83	0.71	0.71
Number of observations	75	75	74	75	74	75	75	68	69	71	71
Differences in predicted values when settler mortality is equal to 500 (log=6.2)											
Imp. by France - Common law	-3.2[a]	-3.2[a]	-3.2[a]	-3.3[a]	-3.2[a]	-3.2[a]	-3.3[a]	-2.7[a]	-2.9[a]	-2.7[a]	-2.7[a]
Spanish law leg.- Common law	-2.3	-2.1	-1.8	-2.0	-2.4	-2.4	-1.8	-3.9[a]	-1.9	-3.6[a]	-3.6[a]
Others - Common law	-4.7[a]	-4.7[a]	-4.6[a]	-4.8[a]	-4.7[a]	-4.4[a]	-4.9[a]	-3.3[a]	-4.2[a]	-3.7[a]	-3.7[a]

Notes: The endowments indicator is the log of potential settler mortality rate. Dependent variables are measured in 2006. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when potential settler mortality rate is equal to 500 (log=6.2). [a] means that differences are significant at the 5% level.

TABLE A4- RESULTS WITH SETTLER MORTALITY AS ENDOWMENTS INDICATOR: (II) INVESTOR PROTECTION

	Basic regression	**Control variables**						**Outliers**			
								Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Implantation by France	-7.534***	-7.391***	-7.182***	-7.761***	-7.269***	-7.424***	-7.705***	-8.261***	-7.6***	-8.072***	-8.072***
	(1.512)	(1.545)	(1.692)	(1.513)	(1.56)	(1.509)	(1.451)	(2.372)	(1.504)	(1.513)	(1.513)
- Spanish law legacy	-7.133**	-7.462**	-6.311*	-7.014**	-6.891**	-7.496**	-7.147**	2.223	-7.199**	-7.671**	-7.671**
	(3.183)	(3.188)	(3.285)	(3.215)	(3.209)	(3.072)	(3.266)	(6.701)	(3.186)	(3.192)	(3.192)
- Others	-2.535	-2.551	-2.322	-2.212	-2.372	-2.954	-2.274	-0.72	-0.248	1.405	1.405
	(4.612)	(4.612)	(5.061)	(4.333)	(4.684)	(4.749)	(4.188)	(2.506)	(2.492)	(1.609)	(1.609)
- Common law x settler mortality	-0.808***	-0.762***	-0.754***	-0.847***	-0.792***	-0.639***	-0.898***	-0.96***	-0.798***	-0.96***	-0.96***
	(0.213)	(0.225)	(0.225)	(0.212)	(0.218)	(0.223)	(0.233)	(0.21)	(0.209)	(0.209)	(0.209)
- Implantation by France x settler mortality	0.23	0.245	0.231	0.217	0.2	0.382*	0.147	0.276	0.23	0.23	0.23
	(0.203)	(0.205)	(0.212)	(0.206)	(0.206)	(0.221)	(0.213)	(0.386)	(0.204)	(0.204)	(0.204)
- Spanish law legacy x settler mortality	0.416	0.423	0.402	0.416	0.397	0.627	0.416	-1.885	0.416	0.416	0.416
	(0.646)	(0.65)	(0.646)	(0.651)	(0.648)	(0.624)	(0.656)	(1.522)	(0.648)	(0.648)	(0.648)
- Others x settler mortality	-0.551	-0.505	-0.501	-0.666	-0.56	-0.27	-0.716	-0.991*	-0.991*	-1.462***	-1.462***
	(0.872)	(0.894)	(0.936)	(0.819)	(0.89)	(0.894)	(0.793)	(0.506)	(0.504)	(0.266)	(0.266)
Years since independence		0.004									
		(0.004)									
Catholics			-0.013								
			(0.016)								
Muslims			-0.008								
			(0.013)								
Other religions			-0.009								
			(0.015)								
High indigenous mortality				-0.437							
				(0.494)							
Ethnic fractionalization					0.255						
					(0.64)						
Ln GDP pc 1970						0.401*					
						(0.214)					
America							-0.695				
							(0.597)				
Asia							-0.387				
							(0.555)				
Constant	9.649***	9.234***	10.173***	9.966***	9.384***	5.687**	10.358***	10.187***	9.715***	10.187***	10.187***
	(0.963)	(1.12)	(1.36)	(0.989)	(1.043)	(2.29)	(1.251)	(0.963)	(0.948)	(0.96)	(0.96)
R-squared	0.56	0.56	0.54	0.56	0.54	0.58	0.57	0.62	0.63	0.64	0.64
Number of observations	75	75	74	75	74	75	75	68	72	71	71
Differences in predicted values when settler mortality is equal to 500 (log=6.2)											
Imp. by France - Common law	-1.1[a]	-1.1[a]	-1.1[a]	-1.1[a]	-1.1[a]	-1.1[a]	-1.2[a]	-0.6	-1.2[a]	-0.7	-0.7
Spanish law leg.- Common law	0.5	-0.1	0.9	0.8	0.5	0.4	1.0	-3.5	0.3	0.9	0.9
Others - Common law	-0.9	-1.0	-0.8	-1.1	-0.9	-0.7	-1.1	-0.9	-1.4	-1.7[a]	-1.7[a]

Notes: The endowments indicator is the log of potential settler mortality rate. Dependent variables are measured in 2006. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when potential settler mortality rate is equal to 500 (log=6.2). [a] means that differences are significant at the 5% level.

TABLE A4- RESULTS WITH SETTLER MORTALITY AS ENDOWMENTS INDICATOR: (III) INFORMATION SHARING

	Basic regression	**Control variables**						**Outliers**			
								Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Implantation by France	-5.364***	-4.784***	-5.554***	-5.312***	-5.32***	-5.244***	-5.285***	-4.852***	-5.679***	-6.089***	-6.089***
	(1.064)	(1.057)	(1.374)	(1.081)	(1.022)	(1.145)	(1.109)	(1.455)	(1.015)	(1.046)	(1.046)
- Spanish law legacy	-1.382	-2.714	-2.533	-1.41	-1.309	-1.778	-1.397	-0.252	-1.698	-0.571	-0.571
	(3.516)	(3.435)	(3.929)	(3.551)	(3.587)	(3.518)	(3.684)	(2.845)	(3.507)	(2.83)	(2.83)
- Others	-7.675***	-7.739***	-7.472***	-7.749***	-7.5***	-8.13***	-7.822***	0.142	-9.897***	-7.875***	-7.875***
	(2.743)	(1.611)	(2.607)	(2.642)	(2.767)	(2.707)	(2.797)	(5.085)	(1.403)	(2.008)	(2.008)
- Common law x settler mortality	-1.184***	-0.997***	-1.199***	-1.175***	-1.138***	-1***	-1.145***	-1.299***	-1.228***	-1.343***	-1.343***
	(0.167)	(0.163)	(0.189)	(0.175)	(0.189)	(0.193)	(0.21)	(0.18)	(0.162)	(0.175)	(0.175)
- Implantation by France x settler mortality	-0.139	-0.079	-0.132	-0.136	-0.101	0.026	-0.103	-0.304	-0.139	-0.139	-0.139
	(0.112)	(0.1)	(0.14)	(0.113)	(0.104)	(0.18)	(0.125)	(0.203)	(0.112)	(0.113)	(0.113)
- Spanish law legacy x settler mortality	-0.206	-0.176	-0.218	-0.206	-0.182	0.024	-0.206	-0.563	-0.206	-0.563	-0.563
	(0.781)	(0.769)	(0.857)	(0.787)	(0.796)	(0.798)	(0.793)	(0.613)	(0.782)	(0.614)	(0.614)
- Others x settler mortality	0.421	0.606*	0.29	0.448	0.433	0.727	0.501	-1.124	0.733***	0.344	0.344
	(0.494)	(0.309)	(0.505)	(0.472)	(0.489)	(0.507)	(0.463)	(0.947)	(0.267)	(0.357)	(0.357)
Years since independence		0.016***									
		(0.005)									
Catholics			0.024								
			(0.02)								
Muslims			0.011								
			(0.013)								
Other religions			0.009								
			(0.014)								
High indigenous mortality				0.1							
				(0.617)							
Ethnic fractionalization					-0.327						
					(0.515)						
Ln GDP pc 1970						0.436*					
						(0.22)					
America							0.33				
							(0.762)				
Asia							0.166				
							(0.527)				
Constant	7.352***	5.677***	6.323***	7.279***	7.308***	3.044	7.036***	7.757***	7.667***	8.077***	8.077***
	(0.808)	(0.983)	(1.348)	(0.877)	(0.841)	(2.449)	(1.154)	(0.841)	(0.742)	(0.78)	(0.78)
R-squared	0.74	0.8	0.75	0.74	0.74	0.76	0.74	0.76	0.81	0.82	0.82
Number of observations	75	75	74	75	74	75	75	68	73	67	67
Differences in predicted values when settler mortality is equal to 500 (log=6.2)											
Imp. by France - Common law	1.1[a]	0.9[a]	1.1[a]	1.1[a]	1.1[a]	1.1[a]	1.2[a]	1.3[a]	1.1[a]	1.4[a]	1.4[a]
Spanish law leg.- Common law	4.7[a]	2.4	3.6	4.6[a]	4.6[a]	4.6[a]	4.4[a]	4.3[a]	4.7[a]	4.3[a]	4.3[a]
Others - Common law	2.3[a]	2.2[a]	1.8[a]	2.3[a]	2.3[a]	2.6[a]	2.4[a]	1.2	2.3[a]	2.6[a]	2.6[a]

Notes: The endowments indicator is the log of potential settler mortality rate. Dependent variables are measured in 2006. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when potential settler mortality rate is equal to 500 (log=6.2). [a] means that differences are significant at the 5% level.

TABLE A4- RESULTS WITH SETTLER MORTALITY AS ENDOWMENTS INDICATOR: (IV) CONTRACT ENFORCEMENT

	Basic regression	**Control variables**						**Outliers**			
								Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Implantation by France	0.875	0.824	0.491	0.894	0.835	0.852	0.921	0.389	0.79	0.116	0.116
	(0.585)	(0.577)	(0.581)	(0.614)	(0.57)	(0.62)	(0.592)	(0.562)	(0.558)	(0.374)	(0.374)
- Spanish law legacy	1.543*	1.661*	1.203	1.534	1.477	1.621*	1.51	1.725	1.459	1.349	1.349
	(0.918)	(0.916)	(0.976)	(0.92)	(0.923)	(0.911)	(0.929)	(1.41)	(0.902)	(0.913)	(0.913)
- Others	2.282***	2.288***	2.065**	2.256***	2.126***	2.372**	2.164***	2.477**	2.198**	1.339	1.339
	(0.844)	(0.847)	(0.909)	(0.825)	(0.787)	(0.888)	(0.761)	(1.052)	(0.827)	(0.804)	(0.804)
- Common law x settler mortality	0.155***	0.138**	0.115**	0.158**	0.114*	0.119*	0.176***	0.174**	0.13***	0.122**	0.122**
	(0.056)	(0.065)	(0.057)	(0.064)	(0.057)	(0.067)	(0.062)	(0.065)	(0.046)	(0.052)	(0.052)
- Implantation by France x settler mortality	-0.027	-0.032	-0.005	-0.026	-0.06	-0.059	-0.008	0.067	-0.027	0.069	0.069
	(0.089)	(0.086)	(0.087)	(0.09)	(0.091)	(0.102)	(0.084)	(0.091)	(0.089)	(0.049)	(0.049)
- Spanish law legacy x settler mortality	-0.163	-0.166	-0.172	-0.163	-0.185	-0.209	-0.163	-0.19	-0.163	-0.163	-0.163
	(0.181)	(0.183)	(0.191)	(0.182)	(0.182)	(0.188)	(0.184)	(0.3)	(0.181)	(0.182)	(0.182)
- Others x settler mortality	-0.271	-0.287*	-0.282	-0.261	-0.281*	-0.331*	-0.221	-0.295	-0.271	-0.127	-0.127
	(0.169)	(0.17)	(0.181)	(0.173)	(0.155)	(0.19)	(0.157)	(0.207)	(0.169)	(0.155)	(0.155)
Years since independence		-0.001									
		(0.001)									
Catholics			0.004								
			(0.005)								
Muslims			0.003								
			(0.004)								
Other religions			0.001								
			(0.006)								
High indigenous mortality				0.036							
				(0.186)							
Ethnic fractionalization					0.289						
					(0.263)						
Ln GDP pc 1970						-0.086					
						(0.102)					
America							0.203				
							(0.176)				
Asia							0.08				
							(0.21)				
Constant	5.695***	5.843***	5.698***	5.669***	5.735***	6.542***	5.526***	5.626***	5.78***	5.889***	5.889***
	(0.304)	(0.397)	(0.363)	(0.38)	(0.342)	(1.033)	(0.356)	(0.324)	(0.247)	(0.276)	(0.276)
R-squared	0.17	0.18	0.16	0.17	0.16	0.18	0.18	0.15	0.19	0.12	0.12
Number of observations	75	75	74	75	74	75	75	68	72	69	69
Differences in predicted values when settler mortality is equal to 500 (log=6.2)											
Imp. by France - Common law	-0.3	-0.2	-0.3	-0.2	-0.2	-0.3	-0.2	-0.3	-0.2	-0.2	-0.2
Spanish law leg.- Common law	-0.4	-0.2	-0.6	-0.5	-0.4	-0.4	-0.6	-0.5	-0.4	-0.4	-0.4
Others - Common law	-0.4	-0.4	-0.4	-0.4	-0.3	-0.4	-0.3	-0.4	-0.3	-0.2	-0.2

Notes: The endowments indicator is the log of potential settler mortality rate. Dependent variables are measured in 2006. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when potential settler mortality rate is equal to 500 (log=6.2). [a] means that differences are significant at the 5% level.

TABLE A4- RESULTS WITH SETTLER MORTALITY AS ENDOWMENTS INDICATOR: (V) RECOVERY RATE

	Basic regression	**Control variables**						**Outliers**			
								Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Implantation by France	-40.764*	-40.208*	-42.047*	-39.338*	-38.734*	-38.354*	-41.872*	-19.9	-39.476*	-54.354***	-54.354***
	(22.278)	(22.569)	(21.749)	(22.879)	(20.86)	(22.774)	(21.292)	(32.793)	(22.116)	(19.151)	(19.151)
- Spanish law legacy	-13.73	-15.006	-12.173	-14.48	-11.264	-21.675	-19.286	164.037**	-34.286	8.292	8.292
	(51.983)	(52.71)	(54.563)	(52.359)	(53.503)	(48.721)	(53.981)	(65.99)	(47.248)	(62.216)	(62.216)
- Others	-42.921*	-42.983*	-40.846	-44.953	-38.951	-52.083*	-48.32*	-65.219**	-41.632	-69.03***	-69.03***
	(25.122)	(25.576)	(28.336)	(28.114)	(24.802)	(28.733)	(27.873)	(26.861)	(24.992)	(16.205)	(16.205)
- Common law x settler mortality	-9.934***	-9.754***	-9.623***	-9.688***	-9.011***	-6.235**	-11.007***	-11.011***	-9.623***	-9.934***	-9.934***
	(2.317)	(2.419)	(2.484)	(2.485)	(2.549)	(2.342)	(3.016)	(2.587)	(2.25)	(2.325)	(2.325)
- Implantation by France x settler mortality	-5.73*	-5.672*	-5.24*	-5.648*	-5.167*	-2.407	-6.739*	-10.208*	-5.73*	-3.525	-3.525
	(3.127)	(3.16)	(2.938)	(3.175)	(2.734)	(3.516)	(3.411)	(5.354)	(3.134)	(2.438)	(2.438)
- Spanish law legacy x settler mortality	-10.272	-10.243	-10.722	-10.272	-9.912	-5.649	-10.272	-52.494***	-5.844	-16.036	-16.036
	(11.297)	(11.396)	(11.622)	(11.383)	(11.659)	(10.61)	(11.47)	(14.579)	(10.341)	(13.95)	(13.95)
- Others x settler mortality	-7.418*	-7.241	-7.599	-6.693	-7.245*	-1.278	-7.655	-3.935	-7.418*	-2.501	-2.501
	(4.156)	(4.36)	(4.884)	(5.18)	(4.013)	(5.466)	(4.777)	(4.346)	(4.166)	(2.006)	(2.006)
Years since independence		0.015									
		(0.068)									
Catholics			0.004								
			(0.254)								
Muslims			0.002								
			(0.185)								
Other religions			-0.071								
			(0.203)								
High indigenous mortality				2.747							
				(8.151)							
Ethnic fractionalization					-4.826						
					(9.16)						
Ln GDP pc 1970						8.775***					
						(2.907)					
America							-1.964				
							(9.763)				
Asia							-5.904				
							(7.271)				
Constant	86.741***	85.135***	87.189***	84.745***	84.714***	0.137	94.261***	90.561***	85.452***	86.741***	86.741***
	(11.977)	(13.957)	(18.479)	(13.339)	(12.533)	(29.852)	(17.335)	(12.681)	(11.598)	(12.017)	(12.017)
R-squared	0.56	0.56	0.54	0.56	0.54	0.62	0.57	0.6	0.59	0.62	0.62
Number of observations	75	75	74	75	74	75	75	68	72	71	71
Differences in predicted values when settler mortality is equal to 500 (log=6.2)											
Imp. by France - Common law	-14.6[a]	-14.8[a]	-14.8[a]	-14.2[a]	-14.9[a]	-14.6[a]	-15.3[a]	-14.9[a]	-15.3[a]	-14.5[a]	-14.5[a]
Spanish law leg.- Common law	-15.8	-18.0	-19.0	-18.1	-16.9	-18.0	-14.7	-93.8[a]	-10.8	-29.6	-29.6
Others - Common law	-27.3[a]	-27.4[a]	-28.3[a]	-26.3[a]	-28.0[a]	-21.3[a]	-27.5[a]	-21.2[a]	-27.9[a]	-22.8[a]	-22.8[a]

Notes: The endowments indicator is the log of potential settler mortality rate. Dependent variables are measured in 2006. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when potential settler mortality rate is equal to 500 (log=6.2). [a] means that differences are significant at the 5% level.

TABLE A4- RESULTS WITH SETTLER MORTALITY AS ENDOWMENTS INDICATOR: (VI) STARTING A BUSINESS

	Basic regression	**Control variables**						**Outliers**			
								Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Implantation by France	1.005	0.932	1.303	1.01	1.211	0.903	1.237	0.332	-0.069	0.611	0.611
	(1.041)	(1.111)	(1.034)	(1.077)	(0.968)	(0.994)	(0.991)	(1.674)	(0.922)	(1.01)	(1.01)
- Spanish law legacy	4.1*	4.268*	3.831*	4.098*	4.22*	4.436**	4.706**	-2.093	3.386	1.241	1.241
	(2.108)	(2.154)	(2.258)	(2.133)	(2.238)	(1.999)	(2.196)	(2.322)	(2.088)	(1.935)	(1.935)
- Others	4.542*	4.55*	4.645	4.536*	4.369*	4.93*	4.95**	3.648	1.529	3.432***	3.432***
	(2.566)	(2.573)	(2.835)	(2.621)	(2.273)	(2.79)	(2.215)	(3.888)	(2.007)	(1.03)	(1.03)
- Common law x settler mortality	0.253**	0.23*	0.259*	0.254**	0.177	0.097	0.428***	0.269*	0.125	0.18*	0.18*
	(0.113)	(0.115)	(0.13)	(0.114)	(0.121)	(0.102)	(0.15)	(0.134)	(0.088)	(0.098)	(0.098)
- Implantation by France x settler mortality	0.128	0.12	0.083	0.128	0.018	-0.013	0.291*	0.263	0.179	0.128	0.128
	(0.137)	(0.138)	(0.117)	(0.137)	(0.115)	(0.158)	(0.146)	(0.261)	(0.13)	(0.138)	(0.138)
- Spanish law legacy x settler mortality	-0.501	-0.505	-0.466	-0.501	-0.572	-0.697	-0.501	0.951*	-0.501	0.072	0.072
	(0.46)	(0.462)	(0.466)	(0.463)	(0.493)	(0.441)	(0.467)	(0.508)	(0.462)	(0.421)	(0.421)
- Others x settler mortality	-0.455	-0.478	-0.48	-0.452	-0.488	-0.714	-0.32	-0.277	0.054	-0.162	-0.162
	(0.5)	(0.509)	(0.541)	(0.516)	(0.436)	(0.556)	(0.434)	(0.744)	(0.416)	(0.169)	(0.169)
Years since independence		-0.002									
		(0.004)									
Catholics			0.006								
			(0.013)								
Muslims			0.002								
			(0.009)								
Other religions			0.009								
			(0.01)								
High indigenous mortality				0.009							
				(0.41)							
Ethnic fractionalization					0.942						
					(0.591)						
Ln GDP pc 1970						-0.371**					
						(0.151)					
America							0.67				
							(0.468)				
Asia							0.89**				
							(0.363)				
Constant	2.058***	2.269***	1.535	2.052***	1.852***	5.723***	0.781	2.003***	2.773***	2.452***	2.452***
	(0.594)	(0.692)	(0.956)	(0.616)	(0.639)	(1.444)	(0.912)	(0.658)	(0.475)	(0.53)	(0.53)
R-squared	0.31	0.32	0.32	0.31	0.34	0.38	0.39	0.3	0.31	0.41	0.41
Number of observations	75	75	74	75	74	75	75	68	69	68	68
Differences in predicted values when settler mortality is equal to 500 (log=6.2)											
Imp. by France - Common law	0.2	0.3	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.3	0.3
Spanish law leg.- Common law	-0.6	-0.3	-0.7	-0.6	-0.4	-0.5	-1.1	2.1[a]	-0.5	0.6	0.6
Others - Common law	0.1	0.2	0.1	0.1	0.2	-0.1	0.3	0.3	1.1	1.3[a]	1.3[a]

Notes: The endowments indicator is the log of potential settler mortality rate. Dependent variables are measured in 2006. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when potential settler mortality rate is equal to 500 (log=6.2). [a] means that differences are significant at the 5% level.

TABLE A4- RESULTS WITH SETTLER MORTALITY AS ENDOWMENTS INDICATOR: (VII) REGISTERING A PROPERTY

	Basic regression	**Control variables**						**Outliers**			
								Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Implantation by France	2.113*	2.024	2.433*	1.938	2.036	2.035*	2.212*	1.525	1.49	0.402	0.402
	(1.194)	(1.315)	(1.249)	(1.282)	(1.27)	(1.141)	(1.267)	(1.602)	(1.008)	(0.946)	(0.946)
- Spanish law legacy	-1.693	-1.487	-2.109	-1.601	-1.724	-1.434	-1.515	-3.715*	-1.86	-4.143***	-4.143***
	(2.15)	(2.183)	(2.223)	(2.158)	(2.155)	(2.171)	(2.178)	(2.087)	(2.117)	(1.29)	(1.29)
- Others	3.099**	3.109**	3.274**	3.349**	3.228**	3.398**	3.17**	0.723	2.932**	3.439***	3.439***
	(1.297)	(1.171)	(1.464)	(1.269)	(1.34)	(1.355)	(1.406)	(2.695)	(1.232)	(1.234)	(1.234)
- Common law x settler mortality	0.445***	0.416***	0.46***	0.414***	0.492***	0.324**	0.512***	0.489***	0.408***	0.414***	0.414***
	(0.132)	(0.14)	(0.137)	(0.124)	(0.145)	(0.129)	(0.148)	(0.153)	(0.106)	(0.117)	(0.117)
- Implantation by France x settler mortality	0.077	0.068	0.034	0.067	0.137	-0.031	0.14	0.227	0.142	0.336**	0.336**
	(0.185)	(0.188)	(0.167)	(0.188)	(0.199)	(0.204)	(0.206)	(0.263)	(0.173)	(0.156)	(0.156)
- Spanish law legacy x settler mortality	0.81*	0.806*	0.859*	0.81*	0.848*	0.659	0.81*	1.317***	0.81*	1.318***	1.318***
	(0.462)	(0.463)	(0.46)	(0.466)	(0.457)	(0.477)	(0.469)	(0.434)	(0.464)	(0.24)	(0.24)
- Others x settler mortality	-0.036	-0.064	-0.074	-0.125	-0.017	-0.236	0.034	0.441	-0.036	-0.189	-0.189
	(0.25)	(0.233)	(0.288)	(0.264)	(0.25)	(0.306)	(0.294)	(0.504)	(0.251)	(0.252)	(0.252)
Years since independence		-0.002									
		(0.005)									
Catholics			0.013								
			(0.012)								
Muslims			0.007								
			(0.008)								
Other religions			0.014**								
			(0.007)								
High indigenous mortality				-0.338							
				(0.438)							
Ethnic fractionalization					-0.513						
					(0.566)						
Ln GDP pc 1970						-0.286*					
						(0.154)					
America							0.321				
							(0.456)				
Asia							0.329				
							(0.376)				
Constant	1.981***	2.239***	0.918	2.226***	2.059**	4.807***	1.481*	1.823**	2.148***	2.246***	2.246***
	(0.667)	(0.827)	(0.968)	(0.657)	(0.776)	(1.595)	(0.832)	(0.73)	(0.519)	(0.581)	(0.581)
R-squared	0.35	0.36	0.38	0.36	0.36	0.38	0.36	0.37	0.43	0.37	0.37
Number of observations	75	75	74	75	74	75	75	68	70	69	69
Differences in predicted values when settler mortality is equal to 500 (log=6.2)											
Imp. by France - Common law	-0.2	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.2	-0.1	-0.1
Spanish law leg.- Common law	0.6	0.9	0.4	0.9	0.5	0.7	0.3	1.4	0.6	1.5[a]	1.5[a]
Others - Common law	0.1	0.1	0.0	0.0	0.1	-0.1	0.2	0.4	0.2	-0.3	-0.3

Notes: The endowments indicator is the log of potential settler mortality rate. Dependent variables are measured in 2006. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when potential settler mortality rate is equal to 500 (log=6.2). [a] means that differences are significant at the 5% level.

TABLE A4.1- CONTROLLING FOR VARIABLES RELATED TO THE ECONOMIC POTENTIAL

Dependent variable:	Creditor and investor rigths and disclosure			Legal system efficiency		Regulations	
	Creditor rights	Investor protection	Information sharing	Contract enforcement	Recovery rate	Starting a business	Registering a property
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
- Common law (Ref. group)							
- Civil law groups:							
• Implantation by France	-7.789***	-8.49***	-4.869***	0.957	-54.564**	1.356	2.057*
	(1.87)	(1.774)	(1.171)	(0.734)	(21.781)	(0.885)	(1.103)
• Spanish law legacy	-6.631	-6.862**	-1.589	1.785*	-14.472	4.902**	-0.727
	(4.391)	(2.818)	(3.602)	(0.996)	(53.154)	(2.038)	(1.937)
• Others	-2.875	-8.044**	-6.471	2.718***	-78.465***	6.54***	2.981*
	(2.034)	(3.378)	(4.097)	(0.758)	(16.181)	(2.288)	(1.59)
- Common law x settler mortality	-0.564**	-0.823***	-1.164***	0.17**	-10.787***	0.304***	0.435***
	(0.275)	(0.223)	(0.181)	(0.068)	(2.29)	(0.105)	(0.127)
- Implantation by France x settler mortality	0.208	0.366	-0.176	-0.004	-4.458	0.168	0.136
	(0.226)	(0.259)	(0.143)	(0.103)	(3.087)	(0.127)	(0.156)
- Spanish law legacy x settler mortality	0.098	0.375	-0.202	-0.223	-10.085	-0.677	0.53
	(0.964)	(0.549)	(0.807)	(0.2)	(11.507)	(0.439)	(0.421)
- Others x settler mortality	-0.76**	0.487	0.197	-0.329**	-1.296	-0.754*	0.024
	(0.318)	(0.64)	(0.758)	(0.15)	(2.427)	(0.446)	(0.306)
Land suitability for cultivation	2.43	-12.58*	-3.133	0.521	-36.108	4.638	12.44***
	(6.926)	(6.398)	(5.211)	(2.773)	(79.006)	(4.553)	(3.981)
Distance to the coast	-0.014	-0.03	0.042	0.003	-0.079	-0.02	-0.072*
	(0.07)	(0.078)	(0.075)	(0.024)	(0.766)	(0.046)	(0.04)
Landlocked	-0.395	-0.377	-0.77	-0.349	-1.388	-0.346	0.36
	(0.633)	(0.604)	(0.558)	(0.211)	(6.93)	(0.438)	(0.31)
Gap between sighted and colonized	0	0	-0.002*	-0.001	0.026	-0.001	-0.001
	(0.002)	(0.001)	(0.001)	(0.001)	(0.015)	(0.001)	(0.001)
Constant	9.723***	10.445***	7.767***	5.73***	88.62***	1.875***	1.651**
	(1.426)	(1.102)	(0.992)	(0.357)	(13.689)	(0.639)	(0.805)
R-squared	0.68	0.62	0.76	0.22	0.6	0.44	0.55
Number of observations	73	73	73	73	73	73	73
Differences in predicted values when settler mortality is equal to 500 (log=6.2)							
Imp. by France - Common law	-3.0[a]	-1.1	1.3[a]	-0.1	-15.2[a]	0.5[a]	0.2
Spanish law leg.- Common law	-2.5	0.6	4.4[a]	-0.7	-10.1	-1.2	-0.1
Others - Common law	-4.1[a]	0.1	2.0[a]	-0.4	-19.5[a]	0.0	0.4

Notes: This table presents results from estimating equation (1) for the seven dependent variables. The description of variables is provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when potential settler mortality rate is equal to 500 (log=6.2). [a] means that differences are significant at the 5% level.

V. Results omitting the residual group of civil law.

TABLE A5- RESULTS OMITTING THE RESIDUAL GROUP OF CIVIL LAW: (I) CREDITOR RIGHTS

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	-4.37***	-4.381***	-4.298***	-4.332***	-4.217***	-4.12***	-4.331***	-7.297***	-4.37***	-4.583***	-4.7***	-4.643***
	(0.344)	(0.348)	(0.389)	(0.395)	(0.463)	(0.398)	(0.398)	(1.732)	(0.345)	(0.306)	(0.319)	(0.323)
- Spanish law legacy	-3.779***	-3.952***	-4.006***	-3.848***	-3.759***	-3.876***	-3.851***	-6.954	-4.15***	-3.992***	-4.204***	-4.052***
	(0.428)	(0.594)	(0.605)	(0.484)	(0.426)	(0.446)	(0.509)	(4.267)	(0.46)	(0.402)	(0.484)	(0.412)
- Others	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- Common law x pop. density	-0.438***	-0.428***	-0.351*	-0.428***	-0.392**	-0.345*	-0.433***		-0.438***	-0.45***	-0.517***	-0.517***
	(0.152)	(0.16)	(0.183)	(0.15)	(0.155)	(0.18)	(0.149)		(0.152)	(0.134)	(0.12)	(0.12)
- Implantation by France x pop. density	-0.112	-0.105	0.002	-0.105	-0.178	-0.196	-0.112		-0.112	-0.227	-0.08	-0.112
	(0.246)	(0.249)	(0.296)	(0.249)	(0.269)	(0.271)	(0.231)		(0.246)	(0.213)	(0.183)	(0.246)
- Spanish law legacy x pop. density	0.191	0.199	0.173	0.195	0.219	0.279	0.195		1.363**	0.191	0.863	0.191
	(0.287)	(0.29)	(0.302)	(0.289)	(0.298)	(0.294)	(0.291)		(0.577)	(0.287)	(0.671)	(0.287)
- Others x pop. density	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.
Years since independence		0.001										
		(0.004)										
Catholics			0.002									
			(0.014)									
Muslims			-0.005									
			(0.014)									
Other religions			-0.001									
			(0.017)									
High indigenous mortality				0.126								
				(0.488)								
Ethnic fractionalization					-0.368							
					(0.725)							
Ln GDP pc 1970						0.292						
						(0.275)						
America							0.129					
							(0.498)					
Asia							0.032					
							(0.593)					
- Common law x settler mortality								-0.525**				
								(0.25)				
- Implantation by France x settler mortality								0.13				
								(0.22)				
- Spanish law legacy x settler mortality								0.226				
								(0.914)				
- Others x settler mortality								n.a.				
								n.a.				
Constant	7.343***	7.28***	7.382***	7.293***	7.477***	4.998**	7.294***	9.543***	7.343***	7.556***	7.616***	7.616***
	(0.29)	(0.341)	(1.075)	(0.363)	(0.398)	(2.186)	(0.369)	(1.109)	(0.29)	(0.248)	(0.265)	(0.264)
R-squared	0.69	0.69	0.69	0.69	0.68	0.7	0.69	0.66	0.7	0.79	0.78	0.75
Number of observations	82	82	81	82	81	82	82	65	80	77	74	79
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	-3.6[a]	-3.6[a]	-3.5[a]	-3.6[a]	-3.7[a]	-3.8[a]	-3.6[a]	-3.2[a]	-3.6[a]	-4.1[a]	-3.7[a]	-3.7[a]
Spanish law leg.- Common law	-2.3[a]	-2.5[a]	-2.8[a]	-2.4[a]	-2.4[a]	-2.4[a]	-2.4[a]	-2.3	0.0	-2.5[a]	-1.0	-2.4[a]
Others - Common law	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Notes : The endowments indicator is population density in 1500, except in column 8. Dependent variables are measured in 2006. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A5- RESULTS OMITTING THE RESIDUAL GROUP OF CIVIL LAW: (II) INVESTOR PROTECTION

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	-2.515***	-2.58***	-2.416***	-2.313***	-2.473***	-1.971***	-1.852***	-7.534***	-2.515***	-2.453***	-2.7***	-2.515***
	(0.429)	(0.452)	(0.465)	(0.5)	(0.446)	(0.461)	(0.595)	(1.5)	(0.429)	(0.408)	(0.363)	(0.429)
- Spanish law legacy	-1.582***	-2.562***	-1.404**	-1.955***	-1.515***	-1.794***	-1.784***	-7.133**	-1.553***	-1.519***	-1.37***	-1.582***
	(0.402)	(0.592)	(0.547)	(0.389)	(0.421)	(0.405)	(0.366)	(3.158)	(0.52)	(0.38)	(0.39)	(0.402)
- Others	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- Common law x pop. density	-0.341**	-0.285*	-0.271	-0.287*	-0.296*	-0.139	-0.324**		-0.341**	-0.338**	-0.281*	-0.341**
	(0.156)	(0.159)	(0.18)	(0.171)	(0.161)	(0.157)	(0.135)		(0.156)	(0.155)	(0.157)	(0.156)
- Implantation by France x pop. density	0.209	0.248	0.244	0.242	0.221	0.024	-0.039		0.209	0.209	0.346*	0.209
	(0.228)	(0.243)	(0.26)	(0.237)	(0.246)	(0.241)	(0.282)		(0.229)	(0.229)	(0.192)	(0.228)
- Spanish law legacy x pop. density	-0.277	-0.232	-0.28	-0.255	-0.282	-0.085	-0.247		-0.367	-0.277	-0.413**	-0.277
	(0.194)	(0.2)	(0.207)	(0.197)	(0.204)	(0.237)	(0.199)		(0.84)	(0.194)	(0.185)	(0.194)
- Others x pop. density	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.
Years since independence		0.008*										
		(0.004)										
Catholics			-0.006									
			(0.013)									
Muslims			-0.005									
			(0.013)									
Other religions			-0.006									
			(0.014)									
High indigenous mortality				0.682								
				(0.466)								
Ethnic fractionalization					0.069							
					(0.7)							
Ln GDP pc 1970						0.635***						
						(0.233)						
America							0.937**					
							(0.403)					
Asia							1.385**					
							(0.572)					
- Common law x settler mortality								-0.808***				
								(0.211)				
- Implantation by France x settler mortality								0.23				
								(0.202)				
- Spanish law legacy x settler mortality								0.416				
								(0.641)				
- Others x settler mortality								n.a.				
								n.a.				
Constant	5.886***	5.527***	6.274***	5.616***	5.79***	0.784	5.205***	9.649***	5.886***	5.824***	5.806***	5.886***
	(0.281)	(0.352)	(0.967)	(0.396)	(0.492)	(1.853)	(0.363)	(0.956)	(0.282)	(0.247)	(0.283)	(0.281)
R-squared	0.39	0.41	0.37	0.41	0.37	0.45	0.47	0.61	0.39	0.43	0.4	0.39
Number of observations	82	82	81	82	81	82	82	65	80	79	79	82
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	-1.2[a]	-1.4[a]	-1.2[a]	-1.1[a]	-1.3[a]	-1.6[a]	-1.2[a]	-1.1[a]	-1.2[a]	-1.2[a]	-1.3[a]	-1.2[a]
Spanish law leg.- Common law	-1.4[a]	-2.4[a]	-1.4	-1.9[a]	-1.5[a]	-1.7[a]	-1.6[a]	0.5	-1.6	-1.4[a]	-1.7[a]	-1.4[a]
Others - Common law	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Notes: The endowments indicator is population density in 1500, except in column 8. Dependent variables are measured in 2006. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A5- RESULTS OMITTING THE RESIDUAL GROUP OF CIVIL LAW: (III) INFORMATION SHARING

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	-0.824*	-0.995**	-0.752	-0.969**	-0.728	-0.066	-0.298	-5.364***	-0.824*	-0.513	-0.452	-0.452
	(0.417)	(0.436)	(0.495)	(0.48)	(0.457)	(0.383)	(0.543)	(1.055)	(0.417)	(0.39)	(0.372)	(0.372)
- Spanish law legacy	2.944***	0.376	3.442***	3.212***	2.978***	2.649***	3.476***	-1.382	2.891***	3.255***	3.132***	3.132***
	(0.399)	(0.632)	(0.751)	(0.563)	(0.416)	(0.384)	(0.563)	(3.488)	(0.412)	(0.371)	(0.386)	(0.386)
- Others	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- Common law x pop. density	-0.632***	-0.486***	-0.647***	-0.671***	-0.593***	-0.351*	-0.662***		-0.632***	-0.837***	-0.828***	-0.828***
	(0.181)	(0.168)	(0.189)	(0.179)	(0.195)	(0.196)	(0.15)		(0.182)	(0.175)	(0.168)	(0.168)
- Implantation by France x pop. density	0.075	0.179	-0.055	0.051	0.044	-0.182	-0.281		0.075	0.075	-0.187	-0.187
	(0.29)	(0.295)	(0.379)	(0.298)	(0.303)	(0.207)	(0.334)		(0.29)	(0.291)	(0.196)	(0.196)
- Spanish law legacy x pop. density	-0.225	-0.109	-0.166	-0.241	-0.212	0.043	-0.229		-0.057	-0.225	-0.225	-0.225
	(0.212)	(0.179)	(0.255)	(0.218)	(0.221)	(0.189)	(0.213)		(0.535)	(0.212)	(0.212)	(0.212)
- Others x pop. density	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.
Years since independence		0.021***										
		(0.005)										
Catholics			0									
			(0.016)									
Muslims			0.007									
			(0.014)									
Other religions			0.011									
			(0.016)									
High indigenous mortality				-0.49								
				(0.595)								
Ethnic fractionalization					-0.171							
					(0.733)							
Ln GDP pc 1970						0.884***						
						(0.233)						
America							-0.113					
							(0.594)					
Asia							1.646***					
							(0.587)					
- Common law x settler mortality								-1.184***				
								(0.166)				
- Implantation by France x settler mortality								-0.139				
								(0.111)				
- Spanish law legacy x settler mortality								-0.206				
								(0.774)				
- Others x settler mortality								n.a.				
								n.a.				
Constant	1.934***	0.993**	1.383	2.128***	1.972***	-5.171***	1.509***	7.352***	1.934***	1.624***	1.746***	1.746***
	(0.317)	(0.381)	(1.16)	(0.407)	(0.511)	(1.861)	(0.391)	(0.802)	(0.317)	(0.28)	(0.3)	(0.3)
R-squared	0.53	0.64	0.54	0.54	0.53	0.61	0.61	0.78	0.51	0.64	0.62	0.62
Number of observations	82	82	81	82	81	82	82	65	80	79	79	79
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	0.8	0.5	0.6	0.7	0.7	0.3	0.6	1.1[a]	0.8	1.6[a]	1.0	1.0
Spanish law leg.- Common law	3.9[a]	1.2	4.5[a]	4.2[a]	3.9[a]	3.6[a]	4.5[a]	4.7[a]	4.2[a]	4.7[a]	4.5[a]	4.5[a]
Others - Common law	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Notes: The endowments indicator is population density in 1500, except in column 8. Dependent variables are measured in 2006. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A5- RESULTS OMITTING THE RESIDUAL GROUP OF CIVIL LAW: (IV) CONTRACT ENFORCEMENT

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	0.142	0.135	0.077	0.168	0.131	0.135	0.135	0.875	0.142	0.131	0.196*	0.164
	(0.119)	(0.123)	(0.123)	(0.133)	(0.126)	(0.146)	(0.129)	(0.58)	(0.119)	(0.112)	(0.112)	(0.115)
- Spanish law legacy	0.171	0.066	-0.167	0.122	0.152	0.173	0.074	1.543*	0.164	0.112	0.145	0.193*
	(0.112)	(0.178)	(0.172)	(0.128)	(0.117)	(0.115)	(0.132)	(0.91)	(0.118)	(0.096)	(0.099)	(0.107)
- Others	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- Common law x pop. density	0.176***	0.182***	0.162***	0.183***	0.164***	0.174***	0.182***		0.176***	0.157***	0.198***	0.198***
	(0.048)	(0.048)	(0.059)	(0.052)	(0.05)	(0.057)	(0.049)		(0.048)	(0.041)	(0.038)	(0.038)
- Implantation by France x pop. density	-0.064	-0.06	-0.04	-0.059	-0.068	-0.062	-0.038		-0.064	-0.064	-0.11*	-0.064
	(0.067)	(0.068)	(0.068)	(0.068)	(0.077)	(0.074)	(0.072)		(0.067)	(0.067)	(0.064)	(0.067)
- Spanish law legacy x pop. density	0.015	0.02	-0.008	0.018	0.017	0.013	0.019		0.038	-0.013	-0.013	0.015
	(0.058)	(0.059)	(0.07)	(0.058)	(0.059)	(0.064)	(0.059)		(0.159)	(0.048)	(0.048)	(0.058)
- Others x pop. density	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.
Years since independence		0.001										
		(0.001)										
Catholics			0.006									
			(0.004)									
Muslims			0.002									
			(0.003)									
Other religions			0.001									
			(0.004)									
High indigenous mortality				0.09								
				(0.145)								
Ethnic fractionalization					-0.021							
					(0.17)							
Ln GDP pc 1970						-0.008						
						(0.078)						
America							0.112					
							(0.138)					
Asia							-0.093					
							(0.135)					
- Common law x settler mortality								0.155***				
								(0.056)				
- Implantation by France x settler mortality								-0.027				
								(0.088)				
- Spanish law legacy x settler mortality								-0.163				
								(0.18)				
- Others x settler mortality								n.a.				
								n.a.				
Constant	6.326***	6.288***	6.106***	6.291***	6.353***	6.388***	6.317***	5.695***	6.326***	6.336***	6.304***	6.304***
	(0.076)	(0.099)	(0.275)	(0.102)	(0.121)	(0.635)	(0.097)	(0.302)	(0.076)	(0.063)	(0.068)	(0.068)
R-squared	0.26	0.26	0.27	0.26	0.23	0.26	0.28	0.13	0.26	0.27	0.32	0.3
Number of observations	82	82	81	82	81	82	82	65	80	77	77	79
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	-0.4[a]	-0.4[a]	-0.4[a]	-0.4[a]	-0.4[a]	-0.4[a]	-0.4[a]	-0.3	-0.4[a]	-0.4[a]	-0.5[a]	-0.4[a]
Spanish law leg.- Common law	-0.2	-0.3	-0.6	-0.3	-0.2	-0.2	-0.3	-0.4	-0.2	-0.3	-0.3	-0.2
Others - Common law	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Notes: The endowments indicator is population density in 1500, except in column 8. Dependent variables are measured in 2006. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A5- RESULTS OMITTING THE RESIDUAL GROUP OF CIVIL LAW: (V) RECOVERY RATE

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	-34.981***	-36.295***	-36.116***	-34.594***	-36.347***	-27.1***	-30.38***	-40.764*	-34.981***	-34.031***	-31.073***	-34.981***
	(4.488)	(4.988)	(4.914)	(4.534)	(4.564)	(4.6)	(5.191)	(22.101)	(4.493)	(4.362)	(4.388)	(4.493)
- Spanish law legacy	-12.061**	-31.833***	-16.263*	-12.777*	-10.68*	-15.129***	-9.822	-13.73	-15.57***	-13.708***	-12.408**	-15.138***
	(5.308)	(7.502)	(9.594)	(7.471)	(5.441)	(5.127)	(8.066)	(51.571)	(5.155)	(4.707)	(4.96)	(4.908)
- Others	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- Common law x pop. density	-7.411***	-6.288***	-7.889***	-7.308***	-7.001***	-4.488**	-7.518***		-7.411***	-7.182***	-6.241***	-7.411***
	(2.012)	(1.942)	(2.539)	(2.164)	(2.186)	(2.076)	(1.771)		(2.014)	(2.019)	(2.252)	(2.014)
- Implantation by France x pop. density	9.552***	10.354***	8.022***	9.616***	10.93***	6.883**	6.994*		9.552***	9.552***	7.614***	9.552***
	(2.612)	(2.998)	(2.84)	(2.666)	(2.649)	(3.157)	(3.886)		(2.615)	(2.617)	(2.108)	(2.615)
- Spanish law legacy x pop. density	0.199	1.096	-0.033	0.24	-0.372	2.983	0.263		11.273	-2.956	-1.106	-1.106
	(3.932)	(3.904)	(4.107)	(3.948)	(3.979)	(3.743)	(3.969)		(8.295)	(2.24)	(3.098)	(3.091)
- Others x pop. density	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.
Years since independence		0.158***										
		(0.058)										
Catholics			0.183									
			(0.253)									
Muslims			0.202									
			(0.212)									
Other religions			0.127									
			(0.229)									
High indigenous mortality				1.307								
				(7.458)								
Ethnic fractionalization					7.603							
					(7.29)							
Ln GDP pc 1970						9.194***						
						(2.956)						
America							1.999					
							(7.567)					
Asia							12.494**					
							(5.54)					
- Common law x settler mortality								-9.934***				
								(2.299)				
- Implantation by France x settler mortality								-5.73*				
								(3.102)				
- Spanish law legacy x settler mortality								-10.272				
								(11.208)				
- Others x settler mortality								n.a.				
								n.a.				
Constant	38.137***	30.888***	24.929	37.62***	33.563***	-35.755	34.013***	86.741***	38.137***	37.186***	35.407***	38.137***
	(3.58)	(4.884)	(18.214)	(3.936)	(5.485)	(23.194)	(3.535)	(11.882)	(3.584)	(3.416)	(3.648)	(3.584)
R-squared	0.4	0.45	0.39	0.4	0.37	0.47	0.43	0.51	0.41	0.43	0.36	0.42
Number of observations	82	82	81	82	81	82	82	65	80	78	76	80
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	4.1	2.0	0.5	4.4	4.9	-0.9	3.0	-14.6[a]	4.1	4.5	0.8	4.1
Spanish law leg.- Common law	5.5	-14.8	1.8	4.6	4.6	2.1	8.1	-15.8	27.5	-4.0	-0.6	-0.6
Others - Common law	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Notes: The endowments indicator is population density in 1500, except in column 8. Dependent variables are measured in 2006. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A5- RESULTS OMITTING THE RESIDUAL GROUP OF CIVIL LAW: (VI) STARTING A BUSINESS

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	0.832***	0.865***	0.892***	0.667*	0.829***	0.556*	0.676*	1.005	0.832***	0.904***	0.63***	0.825***
	(0.263)	(0.285)	(0.254)	(0.336)	(0.304)	(0.287)	(0.371)	(1.033)	(0.264)	(0.25)	(0.216)	(0.258)
- Spanish law legacy	0.754***	1.252***	0.832**	1.058***	0.743***	0.861***	0.998***	4.1*	0.841***	0.826***	0.779***	0.747***
	(0.193)	(0.446)	(0.372)	(0.229)	(0.209)	(0.185)	(0.24)	(2.091)	(0.214)	(0.175)	(0.19)	(0.186)
- Others	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- Common law x pop. density	0.224**	0.196**	0.249**	0.18*	0.218**	0.122	0.208**		0.224**	0.276***	0.174**	0.174**
	(0.098)	(0.093)	(0.122)	(0.097)	(0.107)	(0.097)	(0.099)		(0.098)	(0.072)	(0.081)	(0.081)
- Implantation by France x pop. density	-0.254	-0.274	-0.205	-0.281	-0.258	-0.161	-0.241		-0.254	-0.254	-0.097	-0.254
	(0.156)	(0.169)	(0.132)	(0.169)	(0.179)	(0.169)	(0.197)		(0.156)	(0.157)	(0.124)	(0.156)
- Spanish law legacy x pop. density	0.088	0.066	0.118	0.071	0.09	-0.009	0.074		-0.185	0.088	-0.013	0.088
	(0.108)	(0.107)	(0.111)	(0.107)	(0.113)	(0.11)	(0.108)		(0.272)	(0.108)	(0.138)	(0.108)
- Others x pop. density	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.
Years since independence		-0.004										
		(0.003)										
Catholics			0.001									
			(0.011)									
Muslims			-0.003									
			(0.009)									
Other religions			0.006									
			(0.01)									
High indigenous mortality				-0.555*								
				(0.291)								
Ethnic fractionalization					-0.021							
					(0.371)							
Ln GDP pc 1970						-0.321**						
						(0.124)						
America							-0.463					
							(0.312)					
Asia							-0.169					
							(0.269)					
- Common law x settler mortality								0.253**				
								(0.112)				
- Implantation by France x settler mortality								0.128				
								(0.136)				
- Spanish law legacy x settler mortality								-0.501				
								(0.456)				
- Others x settler mortality								n.a.				
								n.a.				
Constant	3.246***	3.429***	3.082***	3.466***	3.266***	5.83***	3.438***	2.058***	3.246***	3.174***	3.253***	3.253***
	(0.145)	(0.222)	(0.827)	(0.184)	(0.262)	(1.014)	(0.21)	(0.589)	(0.145)	(0.118)	(0.135)	(0.135)
R-squared	0.27	0.3	0.31	0.33	0.25	0.34	0.31	0.29	0.28	0.38	0.26	0.25
Number of observations	82	82	81	82	81	82	82	65	80	77	75	78
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	-0.3	-0.2	-0.2	-0.4	-0.3	-0.1	-0.4	0.2	-0.3	-0.3	0.0	-0.2
Spanish law leg.- Common law	0.4	1.0	0.5	0.8[a]	0.4	0.6	0.7	-0.6	-0.1	0.4	0.3	0.5
Others - Common law	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Notes: The endowments indicator is population density in 1500, except in column 8. Dependent variables are measured in 2006. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A5- RESULTS OMITTING THE RESIDUAL GROUP OF CIVIL LAW: (VII) REGISTERING A PROPERTY

	Basic regression	**Control variables**						**Settler mortality**	**Outliers**			
									Leverage	Standard. Residuals	Cook's D	Dfits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
- Implantation by France	0.864**	0.859**	0.911***	0.849**	0.783*	0.553	0.768**	2.113*	0.864**	0.467*	0.545**	0.516**
	(0.345)	(0.333)	(0.301)	(0.384)	(0.435)	(0.337)	(0.382)	(1.184)	(0.345)	(0.241)	(0.253)	(0.253)
- Spanish law legacy	0.071	-0.01	-0.195	0.099	0.118	0.192	-0.135	-1.693	0.048	-0.065	-0.035	-0.065
	(0.199)	(0.532)	(0.438)	(0.275)	(0.206)	(0.217)	(0.236)	(2.133)	(0.198)	(0.177)	(0.176)	(0.177)
- Others	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- Common law x pop. density	0.314***	0.319***	0.376***	0.31***	0.32***	0.199**	0.326***		0.314***	0.341***	0.308***	0.341***
	(0.086)	(0.091)	(0.083)	(0.083)	(0.09)	(0.092)	(0.087)		(0.086)	(0.069)	(0.066)	(0.069)
- Implantation by France x pop. density	-0.202	-0.199	-0.092	-0.205	-0.138	-0.097	-0.112		-0.202	-0.118	-0.096	-0.096
	(0.187)	(0.18)	(0.186)	(0.186)	(0.249)	(0.194)	(0.191)		(0.187)	(0.143)	(0.156)	(0.156)
- Spanish law legacy x pop. density	-0.082	-0.079	-0.089	-0.084	-0.109	-0.192*	-0.077		-0.009	-0.082	-0.082	-0.082
	(0.093)	(0.095)	(0.101)	(0.094)	(0.1)	(0.11)	(0.093)		(0.225)	(0.093)	(0.093)	(0.093)
- Others x pop. density	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.
Years since independence		0.001										
		(0.004)										
Catholics			0.005									
			(0.008)									
Muslims			-0.004									
			(0.006)									
Other religions			0.003									
			(0.006)									
High indigenous mortality				-0.052								
				(0.309)								
Ethnic fractionalization					0.355							
					(0.498)							
Ln GDP pc 1970						-0.364***						
						(0.134)						
America							0.154					
							(0.295)					
Asia							-0.389					
							(0.311)					
- Common law x settler mortality								0.445***				
								(0.131)				
- Implantation by France x settler mortality								0.077				
								(0.184)				
- Spanish law legacy x settler mortality								0.81*				
								(0.458)				
- Others x settler mortality								n.a.				
								n.a.				
Constant	3.754***	3.724***	3.594***	3.774***	3.558***	6.676***	3.814***	1.981***	3.754***	3.89***	3.86***	3.89***
	(0.146)	(0.197)	(0.51)	(0.178)	(0.296)	(1.018)	(0.196)	(0.662)	(0.146)	(0.114)	(0.113)	(0.114)
R-squared	0.26	0.26	0.31	0.26	0.27	0.33	0.29	0.32	0.26	0.33	0.29	0.32
Number of observations	82	82	81	82	81	82	82	65	80	78	78	79
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)												
Imp. by France - Common law	-0.3	-0.3	-0.2	-0.3	-0.3	-0.1	-0.2	-0.2	-0.3	-0.6	-0.4	-0.5
Spanish law leg.- Common law	-0.8[a]	-0.9	-1.3[a]	-0.8	-0.9[a]	-0.7	-1.1[a]	0.6	-0.7	-1.0[a]	-0.9[a]	-1.0[a]
Others - Common law	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Notes: The endowments indicator is population density in 1500, except in column 8. Dependent variables are measured in 2006. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of each panel we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). [a] means that differences are significant at the 5% level.

TABLE A5.1- CONTROLLING FOR VARIABLES RELATED TO THE ECONOMIC POTENTIAL

Dependent variable:	Creditor and investor rigths and disclosure			Legal system efficiency		Regulations	
	Creditor rights	Investor protection	Information sharing	Contract enforcement	Recovery rate	Starting a business	Registering a property
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
- Common law (Ref. group)							
- Civil law groups:							
• Implantation by France	-4.229***	-2.31***	-0.983**	0.12	-36***	0.805**	1.166***
	(0.484)	(0.465)	(0.449)	(0.169)	(4.343)	(0.31)	(0.268)
• Spanish law legacy	-3.932***	-1.702***	2.281***	0.082	-16.234**	0.849***	-0.053
	(0.541)	(0.479)	(0.539)	(0.136)	(6.171)	(0.227)	(0.218)
• Others	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- Common law x Pop. dens.	-0.499***	-0.387**	-0.613***	0.174***	-7.329***	0.242***	0.279***
	(0.158)	(0.157)	(0.172)	(0.045)	(1.844)	(0.083)	(0.068)
- Civil law groups x Pop. dens.:							
• Implantation by France x Pop. dens.	-0.143	0.02	0.438	0.003	11.193***	-0.211	-0.222
	(0.339)	(0.315)	(0.403)	(0.111)	(3.412)	(0.186)	(0.192)
• Spanish law legacy x Pop. dens.	0.233	-0.259	-0.366*	0.004	-0.422	0.079	-0.129
	(0.287)	(0.254)	(0.209)	(0.068)	(3.991)	(0.104)	(0.108)
• Others x Pop. dens.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Land suitability for cultivation	10.777	3.333	-11.314	0.388	-98.702	-0.787	8.113*
	(7.36)	(6.915)	(8.337)	(1.844)	(81.564)	(3.801)	(4.128)
Distance to the coast	0.084	0.113	0.038	0.002	1.094	-0.063**	-0.069
	(0.073)	(0.084)	(0.084)	(0.02)	(0.685)	(0.028)	(0.042)
Landlocked	-0.88*	-1.776***	-1.15*	-0.008	-18.264***	0.875***	0.437**
	(0.471)	(0.544)	(0.606)	(0.154)	(5.296)	(0.246)	(0.208)
Gap between sighted and colonized	0	0	-0.004**	-0.001	-0.022	0	-0.001
	(0.002)	(0.001)	(0.002)	(0)	(0.016)	(0.001)	(0.001)
Constant	6.748***	5.723***	3.388***	6.4***	47.947***	3.254***	3.528***
	(0.856)	(0.803)	(0.906)	(0.195)	(7.664)	(0.306)	(0.427)
R-squared	0.71	0.48	0.59	0.28	0.47	0.37	0.41
Number of observations	81	81	81	81	81	81	81
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)							
Imp. by France - Common law	-3.4[a]	-1.4[a]	1.4	-0.3	6.6	-0.2	0.0
Spanish law leg.- Common law	-2.2[a]	-1.4	2.8[a]	-0.3	-0.3	0.5	-1.0[a]
Others - Common law	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Notes: This table presents results from estimating equation (1) for the seven dependent variables. The description of variables is provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of the table we show the differences in predicted values between the common law and each civil law category when pre-colonial population density is equal to 10 (log=2.3). [a] means that differences are significant at the 5% level.

VI. Regressions contained in Tables 2 to 8 with the individual coefficients on the variables related to the economic potential.

TABLE A6- REGRESSIONS CONTAINED IN TABLES 2 TO 8 WITH THE INDIVIDUAL COEFFICIENTS ON THE VARIABLES RELATED TO THE ECONOMIC POTENTIAL

Dependent variable:	Creditor and investor rigths and disclosure			Legal system efficiency		Regulations	
	Creditor rights	Investor protection	Information sharing	Contract enforcement	Recovery rate	Starting a business	Registering a property
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
- Common law (Ref. group)							
- Civil law groups:							
• Implantation by France	-4.129***	-2.223***	-1.046**	0.164	-35.154***	0.851***	1.114***
	(0.482)	(0.46)	(0.453)	(0.163)	(4.215)	(0.309)	(0.269)
• Spanish law legacy	-3.947***	-1.763***	2.184***	0.078	-16.104***	0.868***	-0.011
	(0.506)	(0.459)	(0.5)	(0.129)	(6.007)	(0.224)	(0.214)
• Others	-3.988***	-1.765***	-0.562	0.305*	-35.173***	1.651***	0.753**
	(0.482)	(0.543)	(0.618)	(0.158)	(4.838)	(0.312)	(0.303)
- Common law x Pop. dens.	-0.488***	-0.368**	-0.618***	0.172***	-7.074***	0.233***	0.27***
	(0.158)	(0.153)	(0.171)	(0.045)	(1.867)	(0.085)	(0.073)
- Civil law groups x Pop. dens.:							
• Implantation by France x Pop. dens.	-0.199	-0.009	0.533	-0.025	10.631***	-0.257	-0.207
	(0.322)	(0.301)	(0.389)	(0.102)	(3.083)	(0.185)	(0.192)
• Spanish law legacy x Pop. dens.	0.183	-0.332	-0.366*	-0.005	-1.093	0.091	-0.089
	(0.277)	(0.254)	(0.203)	(0.065)	(4.099)	(0.105)	(0.103)
• Others x Pop. dens.	-0.206	0.056	0.039	-0.048	2.43	-0.475***	0.079
	(0.146)	(0.169)	(0.22)	(0.071)	(1.485)	(0.11)	(0.127)
Land suitability for cultivation	7.438	-2.094	-10.041	0.277	-158.662**	0.677	10.909***
	(5.962)	(5.654)	(6.91)	(1.722)	(71.313)	(3.571)	(3.53)
Distance to the coast	0.036	0.052	0.051	-0.004	0.361	-0.049*	-0.037
	(0.05)	(0.066)	(0.067)	(0.016)	(0.547)	(0.029)	(0.03)
Landlocked	-0.775*	-1.645***	-1.158**	-0.059	-15.087***	0.689**	0.398**
	(0.444)	(0.531)	(0.558)	(0.144)	(5.193)	(0.261)	(0.194)
Gap between sighted and colonized	0.00	-0.001	-0.004***	-0.001	-0.023	0.00	0.00
	(0.001)	(0.001)	(0.001)	(0)	(0.014)	(0.001)	(0.001)
Constant	7.073***	6.252***	3.389***	6.431***	52.885***	3.128***	3.24***
	(0.7)	(0.659)	(0.746)	(0.172)	(6.456)	(0.314)	(0.36)
R-squared	0.73	0.45	0.57	0.26	0.5	0.43	0.37
Number of observations	98	98	98	98	98	98	98
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)							
Imp. by France - Common law	-3.5[a]	-1.4[a]	1.6[a]	-0.3	5.6	-0.3	0.0
Spanish law leg.- Common law	-2.4[a]	-1.7[a]	2.8[a]	-0.3	-2.3	0.5	-0.8[a]
Others - Common law	-3.3[a]	-0.8	1.0	-0.2	-13.3[a]	0.0	0.3

Notes: This table presents results from estimating equation (1) for the seven dependent variables. The description of variables is provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of the table we show the differences in predicted values between the common law and each civil law category when pre-colonial population density is equal to 10 (log=2.3). [a] means that differences are significant at the 5% level.

VII. Standard deviation and coefficient of variation for each legal outcome, by legal categories.

TABLE A7- DISPERSION MEASURES OF LEGAL OUTCOMES BY LEGAL FAMILY

		Creditor rights	Investor protection	Information sharing	Contract enforcement	Recovery rate	Starting a business	Registering a property
Total	sd	2.52	1.66	2.08	0.45	21.95	0.90	0.94
	cv	0.53	0.35	0.93	0.07	0.89	0.24	0.23
	N	100	100	100	100	100	100	100
Common Law	sd	1.92	1.77	2.24	0.54	25.23	0.92	1.06
	cv	0.26	0.30	1.21	0.08	0.68	0.28	0.28
	N	39	39	39	39	39	39	39
French civil law	sd	1.09	1.13	1.95	0.37	15.08	0.78	0.82
	cv	0.35	0.28	0.79	0.06	0.90	0.20	0.20
	N	61	61	61	61	61	61	61
• Implantation by France	sd	0.99	0.99	0.96	0.32	13.35	0.65	0.84
	cv	0.35	0.27	0.80	0.05	0.92	0.17	0.19
	N	25	25	25	25	25	25	25
• Spanish law legacy	sd	1.34	1.23	1.02	0.34	16.16	0.54	0.56
	cv	0.38	0.29	0.21	0.05	0.62	0.14	0.15
	N	18	18	18	18	18	18	18
• Others	sd	0.84	1.09	1.42	0.46	12.19	1.05	0.95
	cv	0.28	0.25	0.78	0.07	1.17	0.25	0.22
	N	18	18	18	18	18	18	18

Notes: sd, cv and *N* refer to standard deviation, coefficient of variation and number of observations, respectively. Legal variables are measured in 2006. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B).

VIII. Disclosure: public registry and private bureau coverage.

TABLE A8- DISCLOSURE: PUBLIC REGISTRY AND PRIVATE BUREAU COVERAGE

Dependent variable:	Information sharing (The depth of credit information index, Table 1, column 3)	Public registry coverage	Private bureau coverage	Average between public and private coverage
	(1)	(2)	(3)	(4)
- Common law (Ref. group)				
- Civil law groups:				
• Implantation by France	-0.824*	-0.453	-23.286***	-11.291***
	(0.418)	(1.279)	(4.909)	(2.465)
• Spanish law legacy	2.944***	8.884***	8.896	9.469**
	(0.401)	(2.301)	(7.761)	(3.999)
• Others	0.117	0.654	-11.914	-4.193
	(0.585)	(1.685)	(8.012)	(4.616)
- Common law x Pop. dens.	-0.632***	0.058	-13.109***	-6.545***
	(0.182)	(0.121)	(2.248)	(1.126)
- Civil law groups x Pop. dens.:				
• Implantation by France x Pop. dens.	0.075	0.857	0.00	0.428
	(0.291)	(0.555)	(0.000)	(0.278)
• Spanish law legacy x Pop. dens.	-0.225	-2.515	-18.249***	-10.382***
	(0.213)	(2.23)	(6.108)	(3.252)
• Others x Pop. dens.	-0.2	-0.653	-4.774	-2.967*
	(0.216)	(0.54)	(2.868)	(1.718)
Constant	1.934***	1.235	23.286***	11.682***
	(0.318)	(1.197)	(4.909)	(2.455)
R-squared	0.50	0.35	0.59	0.62
Number of observations	100	83	83	81
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)				
Imp. by France - Common law	0.8	1.4	6.9	4.8
Spanish law leg.- Common law	3.9[a]	3.0	-2.9	0.6
Others - Common law	1.1	-1.0	7.3	4.0

Notes: This table presents results from estimating equation (1) for four dependent variables related to disclosure. The description of variables is provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. In the bottom part of the table we show the differences in predicted values between the common law and each civil law category when pre-colonial population density is equal to 10 (log=2.3). [a] means that differences are significant at the 5% level.

IX. Adding settler mortality to the instrument set of Table 10.

TABLE A9- ADDING SETTLER MORTALITY TO THE INSTRUMENT SET OF TABLE 10

Dependent variable:	Creditor rights	Investor protection	Information sharing	Contract enforcement	Recovery rate	Starting a business	Registering a property
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Two-stage Least Squares Results							
Customary court cases (% of total)	-0.047**	-0.055***	-0.07***	0.015**	-0.821***	0.027***	0.032***
	(0.02)	(0.019)	(0.015)	(0.006)	(0.157)	(0.007)	(0.009)
Land suitability for cultivation	-3.462	-18.046	-28.031	5.521	-187.544	9.066	16.028
	(22.294)	(15.414)	(20.655)	(6.703)	(214.531)	(7.905)	(11.444)
Landlocked	1.437	0.715	-0.411	-0.962*	27.719**	-0.525	-0.19
	(1.624)	(1.023)	(0.902)	(0.488)	(11.501)	(0.54)	(0.818)
Distance to the coast	0.157	0.058	0.274*	-0.035	2.995**	-0.126*	-0.239**
	(0.19)	(0.198)	(0.148)	(0.042)	(1.092)	(0.064)	(0.1)
Gap between first sighted and colonized	0.002	0.003	-0.001	-0.002	0.045	-0.002	-0.002
	(0.006)	(0.003)	(0.004)	(0.001)	(0.045)	(0.002)	(0.002)
Panel B: First Stage	Columns 1, 2, 3, 4, 5, 6 and 7						
Population density in 1500				4.185			
				(2.83)			
Settler mortality				9.339**			
				(3.506)			
Euro share in 1900				-0.172			
				(0.148)			
Land suitability for cultivation				-283.405			
				(174.33)			
Landlocked				7.88			
				(13.741)			
Distance to the coast				4.327**			
				(1.613)			
Gap between first sighted and colonized				0.025			
				(0.043)			
Partial R^2				0.64			
F- statistic				16.42			
R^2				0.74			
Observations				25			
Panel C: Test of Overidentification							
P-value	0.7765	0.662	0.269	0.157	0.631	0.030	0.818
Panel D: Second Stage with Modern-day European Descendants as Exogenous Variable							
Customary court cases (% of total)	-0.061*	-0.078**	-0.092***	0.02**	-0.75**	0.018	0.026***
	(0.034)	(0.032)	(0.031)	(0.01)	(0.311)	(0.011)	(0.007)
Modern-day European descendants (%)	-2.152	-2.822	-2.893	0.643	4.548	-0.614	-0.594
	(2.215)	(2.209)	(2.198)	(0.687)	(18.847)	(0.881)	(1.055)
P-value (overid-test)	0.1367	0.291	0.236	0.209	0.662	0.010	0.871
Observations	25	25	25	25	25	25	25

Notes: Panel A presents the two-stage least-squares estimates with *Doing Business* indicators employed as the dependent variable. Panel B reports the corresponding first stage for the case in which precolonial population density, potential settler mortality and the European population share in 1900 are the instruments for the extent of indirect rule. Panel C reports the *p-value* associated with the overidentification test, and Panel D presents the results from the two-stage least-squares regression into which the modern-day European population share is incorporated as an exogenous variable. Regressions include a constant term which is omitted to save space. Regressions in panel D also include the following controls: land suitability, landlockedness, distance to the coast and gap between first sighted and colonized. The description of variables is provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. Small-sample correction for standard errors is applied. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.

X. OLS results for the effect of *customary courts* on legal rules/outcomes.

TABLE A10- OLS RESULTS FOR THE EFFECT OF *CUSTOMARY COURTS* ON LEGAL RULES/OUTCOMES

Dependent variable:	Creditor rights	Investor protection	Information sharing	Contract enforcement	Recovery rate	Starting a business	Registering a property
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Customary court cases (% of total)	-0.017	-0.026***	-0.031***	0.006*	-0.421***	0.014**	0.024***
	(0.011)	(0.008)	(0.01)	(0.003)	(0.109)	(0.005)	(0.004)
Land suitability for cultivation	3.466	-8.259	-52.193***	1.715	-472.653***	2.025	12.408
	(12.359)	(12.47)	(11.535)	(4.115)	(157.155)	(6.37)	(7.739)
Distance to the coast	0.105	*0.054*	-0.004	-0.018	0.926	-0.083	-0.144*
	(0.131)	*(0.141)*	(0.146)	(0.038)	(1.126)	(0.051)	(0.072)
Landlocked	-0.203	-1.506**	0.122	-0.083	-1.839	0.851**	-0.095
	(0.75)	(0.707)	(0.853)	(0.205)	(8.742)	(0.353)	(0.333)
Gap between first sighted and colonized	0.001	0.002	-0.005**	-0.001**	-0.026	-0.001	-0.001
	(0.003)	(0.002)	(0.002)	(0.001)	(0.032)	(0.001)	(0.001)
Constant	7.223***	6.889***	6.627***	6.428***	78.931***	2.98***	3.073***
	(1.384)	(1.288)	(1.113)	(0.334)	(12.538)	(0.573)	(0.781)
R^2	0.06	0.38	0.49	0.18	0.41	0.37	0.49
Observations	37	37	37	37	37	37	37

Notes: This table presents results from estimating equation (3) via OLS. The description of variables is provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.

XI. The relationship between endowments and the number of Africans per administrator.

TABLE A11- THE RELATIONSHIP BETWEEN ENDOWMENTS AND THE NUMBER OF AFRICANS PER ADMINISTRATOR

Dependent variable:	Number of Africans per administrator			
	Only 'Implantation by France' colonies	Only 'common law' colonies	Both groups	
	(1)	(2)	(3)	(4)
Precolonial population density	-17925.43	6929.811**		
	(25431.45)	(3152.246)		
Implantation by France			23391.96	7881.083
			(30800.46)	(23517.75)
Common law x pop. density			6929.811**	14587.74*
			(3152.246)	(7397.831)
Implantation by France x pop. density			-17925.43	-1238.232
			(25431.45)	(17060.91)
Land suitability for cultivation				-721812
				(542029.7)
Distance to the coast				-660.388
				(2324.936)
Landlocked				30500.33
				(24769.13)
Gap between sighted and colonized				12.303
				(31.454)
Constant	51335.57	27943.61***	27943.61***	43876.41*
	(30544.56)	(3962.154)	(3962.154)	(23534.49)
R-squared	0.05	0.34	0.09	0.26
Number of obs	15	15	30	30

Notes: OLS regressions. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.

XII. The interaction between indirect rule and precolonial centralization.

TABLE A12- THE INTERACTION BETWEEN INDIRECT RULE AND PRECOLONIAL CENTRALIZATION

Dependent variable:	Creditor and investor rigths and disclosure			Legal system efficiency		Regulations	
	Creditor rights	Investor protection	Information sharing	Contract enforcement	Recovery rate	Starting a business	Registering a property
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Customary court cases (% of total)	-0.019	-0.035**	-0.035***	0.003	-0.508***	0.013*	0.029***
	(0.023)	(0.014)	(0.012)	(0.004)	(0.138)	(0.007)	(0.005)
Precolonial centralization	-1.398	-0.448	2.457**	0.696**	-18.366	0.858	1.115*
	(2.402)	(1.272)	(0.939)	(0.33)	(15.364)	(0.595)	(0.643)
Customary court cases x Precolonial centralization	0.019	0.023	-0.018	-0.001	0.357	-0.007	-0.022
	(0.054)	(0.031)	(0.022)	(0.008)	(0.295)	(0.014)	(0.013)
Land suitability for cultivation	-1.992	-10.42	-43.007***	4.217	-546.926***	5.245	16.927*
	(16.448)	(13.494)	(13.226)	(4.506)	(167.79)	(6.607)	(8.786)
Landlocked	-0.048	-1.715**	-0.403	-0.296	-1.418	0.674*	-0.114
	(0.859)	(0.762)	(0.883)	(0.225)	(8.156)	(0.362)	(0.365)
Distance to the coast	0.097	0.043	0.002	-0.018	0.772	-0.081	-0.135*
	(0.135)	(0.148)	(0.154)	(0.035)	(1.168)	(0.055)	(0.071)
Gap between sighted and colonized	0	0.002	-0.004	-0.001	-0.037	0	0
	(0.003)	(0.002)	(0.003)	(0.001)	(0.033)	(0.001)	(0.001)
Constant	7.984***	7.115***	5.272***	6.04***	88.828***	2.507***	2.473**
	(1.738)	(1.451)	(1.378)	(0.436)	(15.779)	(0.692)	(0.911)
R-squared	0.09	0.39	0.57	0.32	0.43	0.42	0.54
Number of obs	37	37	37	37	37	37	37
Marginal effects for different values of precolonial centralization:							
Percentile 20	-0.019	-0.035**	-0.035***	0.003	-0.508***	0.013*	0.029***
	(0.023)	(0.014)	(0.012)	(0.004)	(0.138)	(0.007)	(0.005)
Percentile 40	-0.019	-0.034**	-0.035***	0.003	-0.5***	0.013*	0.029***
	(0.022)	(0.014)	(0.011)	(0.003)	(0.134)	(0.006)	(0.005)
Percentile 60	-0.007	-0.02*	-0.046***	0.003	-0.282*	0.009	0.015**
	(0.021)	(0.012)	(0.011)	(0.004)	(0.148)	(0.008)	(0.006)
Percentile 80	-0.001	-0.013	-0.052***	0.002	-0.164	0.006	0.008
	(0.036)	(0.02)	(0.017)	(0.006)	(0.226)	(0.011)	(0.01)

Notes: Values of precolonial centralization for percentiles 20, 40, 60 and 80 are 0, 0.023, 0.634 and 0.965, respectively. Variable descriptions are provided in Appendix A. The sample contains non-European countries colonized by Western powers (Appendix B). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.

CHAPTER 4: THE ECONOMIC CONSEQUENCES OF THE SPANISH RECONQUEST: THE LONG-TERM EFFECT OF POLITICAL POWER CONCENTRATION ON DEVELOPMENT

This chapter considers the Spanish Reconquest in the Middle Ages as a "quasi-natural experiment" to analyze the long-term effects of the concentration of political power on economic development. Our analysis shows that: a) there is a strong relationship between the Reconquest and the extent of concentration of *de facto* and *de jure* political power; b) the alleged relationship, which is due to a historical accident, is not associated with any feature related to the economic potential of the territories; and c) the specific configuration of economic and political power distribution in favor of the landed nobility, which persisted over time and generated extractive institutions to exploit the landless peasantry, ultimately influenced the pattern of development of the Spanish provinces.

4.1. INTRODUCTION

This chapter considers the Spanish Reconquest in the Middle Ages as a "quasi-natural experiment" to analyze the long-term effects of the concentration of political power on economic development. The so-called *Reconquista* is a milestone in Spanish history. During a period of almost eight hundred years starting in 711 with the invasion of the Iberian Peninsula by the Muslims, the current territory of Spain experienced a process quite analogous to colonialism. Throughout this long period and after an initial phase of mere resistance, the Christians located in the North gradually conquered the Muslim territory and implemented measures to colonize the new lands. Different factors such as the total area conquered in each stage of the Reconquest –that subsequently needed to be repopulated–, or the military and political conditions prevailing in the Christian kingdoms, led to distinct types of colonization, which in turn affected the type of political institutions established, the distribution of economic power and the associated political equilibrium among the agents involved in that process. In northern Spain, whose conquest was slow and occurred earlier, economic resources (in the form of land) and political power were better distributed among settlers and a more egalitarian society of farmer class emerged. By contrast, in the southern territories conquered later, the repopulation process was monopolized to a large extent by the powerful nobility and the

military orders, resulting in a society characterized by a highly unequal distribution of *de facto* and *de jure* political power favoring these groups at the expense of individual settlers.[80] As argued below, these initial differences in the patterns of distribution of economic and political power persisted over time and led to divergent development paths among the Spanish provinces.

Our basic argument is that: a) the conditions and timing associated with each stage of the Reconquest determined the type of political and economic institutions established in each province; b) the alleged relationship, which is due to a matter of circumstance, is not associated with any feature related to the economic potential of the territories, and hence the Reconquest can be used as an exogenous source of variation in the allocation of political power and its subsequent effect on political institutions and the distribution of resources in society; c) the specific configuration of *de facto* and *de jure* political power distribution in favor of the landed nobility, which persisted over time and generated extractive institutions to exploit the landless peasantry, ultimately influenced the pattern of development of the Spanish provinces. A sketch of the mechanisms at work is provided in Figure 1. By using the Reconquest as an instrument for the distribution of political power we are able to estimate the long-term effect of the concentration of political power on current development.

[80] According to Acemoglu and Robinson (2010, p. 8), "*de jure* political power refers to power that originates from the *political institutions* in society [… and] *de facto* political power originates from the ability of the group in question to solve its collective action problem and from the economic resources available to the group (which determines their capacity to use force [and influence] against other groups)". See also the discussion in AJR (2005, pp. 389-395) and the theory in Acemoglu and Robinson (2006).

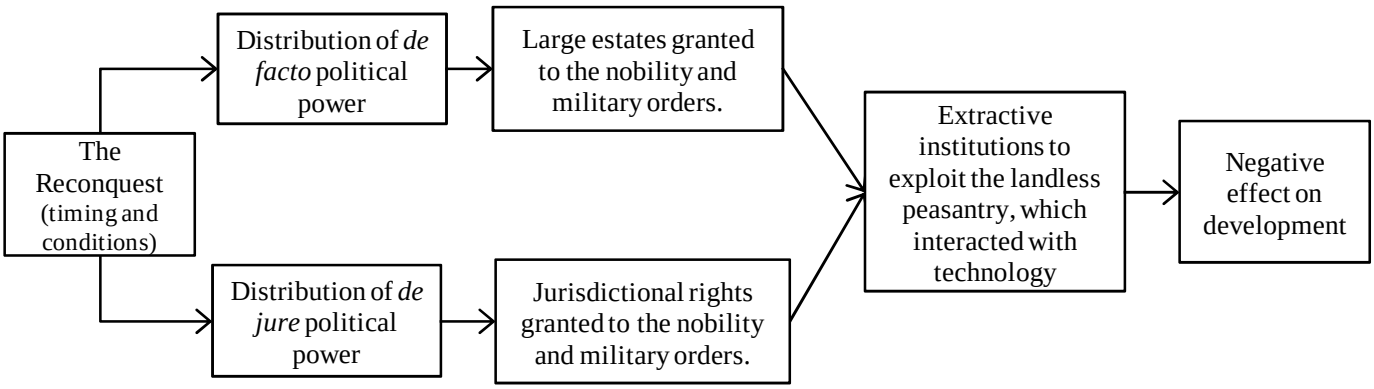

Figure 1. The effect of the Reconquest on development

The present chapter can be framed within a growing body of research that considers economic development as a long-term process with deep historical roots. Many factors associated with economic prosperity such as political and economic institutions, legal rules, inequality or human capital levels are largely the result of historical processes whose origins go far back in time (Nunn 2009 2014; Spolaore and Wacziarg 2013). In a seminal contribution, Acemoglu, Johnson and Robinson –AJR– (2001) estimate the effect of institutions on income by using settler mortality rates as an exogenous source of variation in institutions. Since then, many authors have tried to identify, by means of historical sources of exogenous variation, the effect of political inequality and institutions on economic development.[81]

[81] Banerjee and Iyer (2005) and Iyer (2010) exploit the particularities of the British colonial policy in India in order to analyze the effect of the land revenue system on current economic outcomes. Chaney (2008) and Chaney and Hornbeck (2013) investigate the impact of the expulsion of about 120,000 *moriscos* in 1609 from the Kingdom of Valencia in Spain. Acemoglu et al. (2008) provide evidence for the case of the municipalities of Cundinamarca in Colombia that political inequality reduces current secondary school enrolment rates. Focusing on US state data from the 1860 US census, Nunn (2008) finds evidence of a positive link between slavery and economic inequality. Dell (2010) finds a negative long-term impact of an extensive forced mining labor system operating in some parts of Peru and Bolivia between 1573 and 1812 (known as the mita) on current consumption levels, prevalence of stunted growth in children and education and roads provision. Focusing on within-country variation across the Americas, Bruhn and Gallego (2012) show that colonial activities that relied heavily on labor exploitation (mining and sugar plantation) led to lower economic development. Examining municipality data in colonial Brazil, Naritomi et al. (2012) explain the efficiency of local institutions and the distribution of *de facto* political power in the form of land on the basis of the prevalence of sugarcane plantations and gold

The "quasi-natural experiment" conducted in this chapter has many potentialities. First, our study is novel in that, unlike previous studies focusing on former colonies, it analyzes the experience of a developed economy that was a main colonial power in the Mercantilist era of colonialism.[82] Second, by exploiting the Reconquest as a source of exogenous variation in the distribution of economic and political power in society, we can mitigate several sources of endogeneity such as reverse causality and thus better identify the effect of political institutions on development. Hence, our analysis enables us to test the AJR hypothesis –that historically determined political institutions matter for economic development– in an attractive historical context.

Third, unlike the case of Spanish America where "the processes [by which the distribution of wealth and political power remained highly unequal in society] are not well understood" (Engerman and Sokoloff –ES hereafter–, 2000, p. 222), for Spain it is historically well documented the mechanisms through which the distribution of economic and political power among the agents involved in the Reconquest was conducive to a particular configuration of economic and political institutions governing each area and why this is so persistent. This enables us to understand these processes more fully and draw some general lessons. In addition, the analysis of the Spanish Reconquest is useful because it gives clues about the subsequent colonization of the New World. When the Spaniards faced the colonization of Central and South America in the sixteenth century, they had the long experience gained in the Reconquest and the policies implemented in the occupation of Muslim lands. Therefore, while the recent

mining. By considering the colonization of islands around the world as a natural experiment, Feyrer and Sacerdote (2009) employ wind patterns as an instrument for the length of colonization. Acemoglu et al. (2011a) exploit the exogenous variation introduced by the French Revolution and the drastic reforms imposed by France on German territories, and Acemoglu et al. (2011b) show that mass displacement and execution of Jews population during World War II is associated with slower population growth and per capita income 50 years later. Dell (2012) shows evidence of a negative effect of drought on current development outcomes through the insurgency channel during the Mexican revolution. Chaney (2013) finds that deviant Nile floods reduced the replacement probability of Egypt's highest-ranking religious authority. Alsan (2013) finds evidence of an effect of the Tse Tse fly on current development through its effect on precolonial institutions, and Fenske (2014) finds that African societies in ecologically diverse environments exhibit more precolonial centralization.

[82] See also Acemoglu et al. (2011a) and Acemoglu et al. (2011b) for quasi-natural experiments that took place in non-colonies.

literature has emphasized that Spanish colonial policies were significantly influenced by the preexisting indigenous organization in conquered areas (ES 2002; Frankema 2010), it should not be neglected the fact that, for example, grants of large tracts of land to the nobility had a clear precedent in the homeland.[83] Interestingly, the Spanish Reconquest constitutes a historical process that resembles the long-term outcomes of the colonization of North and South America. As with the contrast between northern and southern Spain, in North America (the US and Canada) a type of colony based on smallholder farmers of European descent flourished, whereas in Central and South America landowners with large estates predominated along with other institutions such as the *encomienda* that perpetuated a highly unequal society (ES 1997, 2000).

Fourth, our analysis shows how the imprint of historical events in the remote past remains visible in the present, even for an industrialized country like Spain. The consequences of inequality in the distribution *de facto* and *de jure* political power precluded large segments of the population in the southern provinces from having access to economic opportunities when Spain entered the industrialization phase. This explains why the distribution of economic and political power reflected in specific economic and political institutions and its interaction with the opportunity to industrialize in the mid-nineteenth century are so important in accounting for the different development paths within Spain.[84]

In the empirical part of the chapter we implement an identification strategy that exploits the particularities surrounding the different stages of the Reconquest as a source of exogenous variation in the concentration of political power. For that purpose, we create two historical measures related to the conditions and timing of the Reconquest

[83] In the territories of the southern plateau and Andalusia, the Crown granted large estates (or *encomiendas*) to the military orders and the nobility (Brenan 1943). "An *encomienda* was an estate given by the King in *señorío*, or with full manorial rights, for one lifetime or for some determinate period only. The *Comendador* was the title of the temporary possessor, who enjoyed all or most of the rights of the King. After the twelfth century *encomiendas* died out except in the military orders, in which they were the recognized form of land tenure" (Brenan 1943, p. 113).

[84] This appears in similar spirit to AJR (2002) who argue that extractive institutions supporting the concentration of wealth and political power in the hands of a small elite (in our case the landed nobility) matter more "when new technologies that require investments from a broad cross-section of the society become available" (p. 1236).

(normalized reconquered area and Reconquest year) and construct a composite indicator that measures the distribution of *de facto* and *de jure* political power among the agents involved in the Reconquest and repopulation process.[85] As a measure of *de facto* political power we employ the ratio of landless workers over the total agrarian active population in 1797, which is closely related to the extent of land concentration in the hands of the nobility and military orders. As a measure of *de jure* political power, we use the percentage of cities and villages over which nobles and military orders had jurisdictional rights in 1797. Our exclusion restriction is that the Reconquest has an influence on current regional incomes only through its effect on the distribution of economic and political power.

Our two-stage least-squares (2SLS) results indicate that our composite indicator of *de facto* and *de jure* political power has high explanatory power for accounting for the current levels of GDP per capita in the Spanish provinces. These results are not driven by a selection problem due to the possibility that –for instance– higher concentration of *de facto* and *de jure* political power prevailed in areas with lower economic potential or that the Christian kingdoms chose to conquer first economically more attractive territories. In addition, we show that the adverse effect of an unequal distribution of economic and political power became apparent during the industrialization period, this being a major factor that explains the failure to industrialize in territories exhibiting a high degree of political power concentration. In sum, this chapter provides evidence consistent with the AJR hypothesis suggesting that persistent political inequality is a severe impediment to the requirements for modern economic growth, which is based on entrepreneurship, innovation and the participation of broad segments of the population in economic activity.

The remainder of the chapter is organized as follows. Section 2 gives a historical overview of the origins and persistence of the unequal distribution of economic and political power in Spain. Section 3 describes the data, while Section 4 presents the

[85] Even within a constant general institutional framework for Spain as a whole, the Reconquest gave rise to different patterns of concentration of *de facto* political power (as given by the extent of land concentration) and *de jure* political power (as given by the different jurisdictional rights that the powerful groups held) at the regional and even local levels. In our analysis we exploit this variation across the Spanish provinces.

reduced-form estimates of the effect of the Reconquest on current levels of GDP per capita across the Spanish provinces. Section 5 develops the identification strategy and presents the 2SLS results. Section 6 investigates the timing of the effect of the Reconquest. Finally, Section 7 puts forward some implications and concludes.

4.2. HISTORICAL BACKGROUND

4.2.1 The Reconquest and the Origins of Inequality in the Distribution of Economic and Political Power in Spain[86]

An interesting feature of Spanish history is that during a period of almost eight hundred years the Iberian Peninsula experienced a process which is quite analogous to colonialism. In 711 the current Spanish territory was invaded by the Muslims, who occupied in the following years almost the whole Peninsula and created an Arab state that was known as *al-Andalus*. This Western Europe Arab state achieved great economic and cultural development, becoming during much of the period of Muslim domination the most advanced country in the Continent (Chejne 1999). With the passage of time, the Christian resistance located in northern Spain conquered the Muslim territory in a process that lasted until 1492 with the fall of the Nazari Kingdom of Granada. This long period of Christian conquest is known as the *Reconquista*. The military campaigns were followed by a process of colonization or repopulation of the new lands.[87] The balance of power among the agents involved in the repopulation process in each stage of the Reconquest and the associated political equilibrium varied significantly from one province to another, which had important consequences for the distribution of *de facto* political power in the form of land and *de jure* political power in the form of jurisdictional rights.

At the one extreme, when the colonization was conducted by settlers with little economic resources, relatively egalitarian societies with smallholdings prevailed; at the

[86] This historical overview draws on Sánchez Albornoz (1932), Brenan (1943), Dominguez-Ortiz (1955), Herr (1958), Vicens Vives (1969), Malefakis (1970), Sobrequés (1972), Carrión (1975), Ruiz-Maya (1979), Glick (1979), Mestre-Campi and Sabaté (1998), Guichard (2002) and García-Ormaechea (2002).

[87] Spanish historiography labels repopulation as the process of colonization of the reconquered lands by the Christian kingdoms. In this chapter we use the terms colonization and repopulation indistinctly to refer to this process.

other, when it was carried out by the powerful nobility or the military orders, oligarchic societies with large estates predominated. Ideally, it would be preferable to have a measure of the exact involvement of each main colonizing group and in turn the exact allocation of economic and political power in each stage of the Reconquest, but with the historical information and data sources available we cannot credibly calculate such a measure in a systematic way. Therefore, as an approximation of the involvement of each colonizing group in the repopulation process, we employ the extent of reconquered area that needed to be repopulated in each phase of the Reconquest, which was a key factor that decisively affected the outcome of the repopulation process (Sobrequés 1972; Malefakis 1970). To the extent that the amount of reconquered area affected the possibility that either group gained control in the repopulation process, this measure may serve our purpose. Besides, the greater the reconquered area, the more likely nobles and military orders were called up to participate in the repopulation and defense of such vast territories from Muslim attacks.

Figure 2 shows how the amount of reconquered area differs markedly across the different stages of the Reconquest. During the first three and half centuries of the Reconquest (from 711 to 1062) the Christian kingdoms conquered about 155,000 km^2, while during the next two centuries (until 1266) the reconquered area almost doubled (about 287,000 km^2). Thus, to operationalize comparison and further analysis, when we refer to small or large areas, we have in mind the normalized reconquered area, which is the area reconquered in each phase of the Reconquest divided by its respective duration in years.[88]

[88] From now on, this is referred to as normalized reconquered area or, simply, reconquered area.

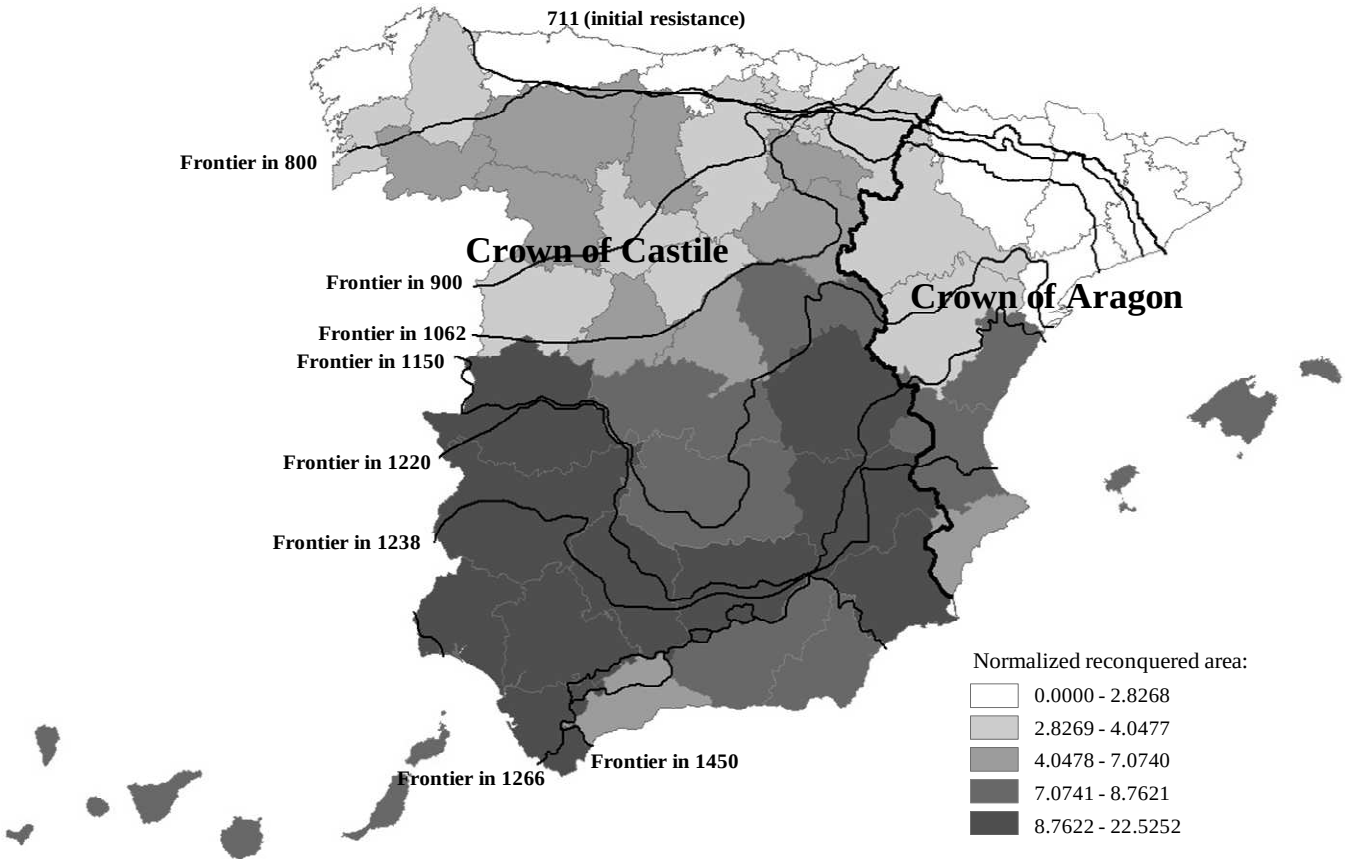

Figure 2. The Spanish Reconquest (711-1492)

A smaller area to be repopulated implied that individual settlers with little economic resources could colonize the territory by themselves. This was the case of the repopulation of the Duero Valley, where the distinctive feature of this process was the predominance of the private initiative, that is, a type of repopulation conducted by individuals who occupied land and acquired its property through the institution of *presura* or *aprisio* (i.e., apprehension of land). In general, it resulted in the creation of a society with a democratic structure of free peasants with access to land (Vicens Vives 1969).[89,90] For the Crown, it was also easier to organize the repopulation when the area

[89] The northern and mountainous territories that did not fall under Muslim control were characterized by the existence of few large estates as well as by a social structure composed of a majority of free men and little class differentiation (Glick 1979).

[90] During the first stages of the Reconquest, there was also official repopulation led by the Church and monasteries (*repoblación monacal*). This was characterized by the fact that communities of free peasants

to be occupied was not large. Thus, in the lands comprised between the Duero and the Tagus the repopulation was to a large extent officially organized and carried out by the King through the creation of municipalities or councils (*repoblación concejil*), which occupied and distributed smallholdings among settlers (Ruiz-Maya 1979).[91] In short, a smaller reconquered area favored a political equilibrium in which *de facto* and *de jure* political power was (in relative terms) evenly distributed among a broad mass of the population.

The above contrasts with the situation in the subsequent stages of the Reconquest between 1062 and 1266 in which larger areas to be repopulated made the colonization through individual settlers infeasible. Likewise, even though the King had accumulated a substantial amount of political power and economic resources, it was also difficult to organize the repopulation at such a large scale by himself. It was then necessary the intervention of the nobility and military orders (that had also become very powerful) to conduct an effective occupation and defense of the new lands.[92] Malefakis (1970) points out that most of the southern third of the peninsula suddenly fell into Christians' hands between the years 1225 and 1250, after the victory in the battle of *Las Navas de Tolosa* in 1212. Thus, in a relatively short period of about half a century the Reconquest was completed, with the exception of the Nazari Kingdom of Granada. In a context in which the quick advance of the Christian frontier created clear problems of manpower and resources, the Crown found in the military orders and the nobility the most "effective means of defense in the border region" (Forey 1984, p. 214). The warrior-monks and warlords were clearly the best alternative for holding and defending extensive areas in

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settled around a church or a monastery. Like in the private repopulation, they normally had limited means to cultivate large land extensions, thus giving rise to smallholdings.

[91] When the repopulation was conducted by the Crown, the result was still beneficial to the peasantry since land was relatively well distributed. Also related is the fact that under royal jurisdiction the peasantry faced less tax burden than under noble jurisdiction where seigneurial duties were added to state taxes (García-Ormaechea 2002).

[92] Following the example of the Holy Land crusaders, the Castilians created three great military orders that served as armies for the country to conquer Muslim lands and defend the Christian frontier. The order of Calatrava was founded in 1158, the order of Santiago in 1170 and the order of Alcántara in 1176, all during the second half of the twelfth century, period from which military orders grew in importance due to their key role in the defense of the frontier (González Jiménez 1989).

the frontier regions. Therefore, in those stages of the Reconquest rendering more reconquered area, the importance of nobles and military orders was greater.[93] Therefore, the magnitude of the conquest deeply affected the subsequent social reorganization (Sobrequés 1972; Malefakis 1970). Since Castilian kings were unable to administer and organize by themselves such a huge territory, they granted large estates and jurisdictional rights to the nobility and military orders. As a result, the concentration of landownership and the proportion of territory under the jurisdiction of nobles or military orders were the highest in the regions of Castile-La Mancha, Extremadura and Andalusia.[94],[95]

It is evident that the balance of power among the colonizing groups involved in the Reconquest clearly changed in favor of the nobility and military orders, relative to the first stages of the Reconquest featuring a small reconquered area. Jurisdictional rights provided the landowning nobility with the legal and political apparatus that afforded them *de jure* political power over the broad mass of the population. This implied the attachment of the landless peasantry to the private land of landowners –who had to provide the latter with labor services and did not enjoy freedom of movement– and the control of the judiciary and the local council by the nobility. This *de jure* political power in combination with *de facto* political power afforded by the high concentration of land allowed the landed elite to set economic institutions for their own benefit. They

[93] As noted by González Jiménez (1989), from the reign of Alfonso VII onwards, defensive concerns led the Crown to involve the nobility in the task of settlement who, along with the military orders, became the main beneficiaries of jurisdictions. In addition, Collantes de Terán Sánchez (2006) points out that the existence of vast territories in the frontier with the Granada Kingdom over some centuries enabled the nobility to continue to play an important role in the defense of Christian territories. This constituted a means of subsequent empowerment and social promotion (González Jiménez 1989).

[94] Regarding the possibility that the concentration of land in Andalusia after the Reconquest merely reflected the situation under Muslim domination, Malefakis (1970) states that it is indisputable that land concentration in Moorish times was lower than under Castilian domination. According to Vicens Vives (1969), along the frontier of Granada the large landholdings of the military orders and the greatest noble families were founded to such an extent that all noblemen that played an important role in Spanish history since the fifteenth century based their power on this *latifundia* system.

[95] The repopulation was different in Aragon to a large extent due to the smaller area that this kingdom reconquered. In this case, the King was able to carefully organize the colonization and the nobility played a smaller role (Sobrequés 1972).

included severe restrictions on land and grain transactions, labor contracts with caps on agricultural wages, land tenure systems implying short-term leases with conditions being updated every year and the obligation to use the nobles' mill to grind the grain. Nobles also exploited monopoly rights over other manufacturing activities such as public ovens, butcheries, forges, wineries or services such as shops, taverns and potteries (Cabrera Muñoz 2006). In many instances, nobles also had the right of taxation at the local level and adjudicating disputes about property, punishing minor crimes and even imposing death sentences for capital crimes (Dewald 2004). Taxes levied by nobles on the administration of justice, the transportation of goods (*montazgo*) and the movement of cattle (*portazgo*) were also important sources of revenues. Besides seigneurial rents, nobles could receive in many instances Church rents (*diezmos*) and Crown rents ceded to them (Molina-Recio 2007). The Crown also paid nobles for the occupation of council positions, the maintenance of troops, and the defense of fortresses (Cabrera Muñoz 2006). In this context, it is clear that the political equilibrium clearly favored the landed nobility at the expense of the agricultural proletariat of the large estates, who were the majority of the population in the regions of southern Spain (Brenan 1943; Dominguez-Ortiz 1955). This originated a society characterized by a high level of social and political inequality.

Another factor that also influenced the outcome of the repopulation process was the timing of the Reconquest, that is, the year in which each province was reconquered. This is due to the fact that the power of the nobility and military orders increased with the passage of time, since the dynamics of continuous war and military mobilization led the warlords and warrior-monks to acquire a high degree of power and influence. The rewards of their participation in the conquest along with the defense requirements against the enemy implied that the nobility and military orders were the main beneficiaries of the increasingly monopolized land allotments and jurisdictional rights allocations.[96] It was not until the consolidation of the Catholic Kings in the late fifteenth

[96] Malefakis (1970) and Ruiz-Maya (1979) provide descriptive statistical evidence indicating that areas conquered later are associated with higher land concentration.

century that the Crown had accumulated enough power as to be able to control nobles' pre-eminence (Vicens Vives 1969).[97]

4.2.2. Aggravation and Persistence in Inequality in the Distribution of Economic and Political Power

The picture of the concentration of economic and political power arising from the Reconquest persisted over time and even accentuated, in a clear process of path dependence. Several factors explain this process of extraordinary persistence. First, the population decline after Christian conquest due to migrations, the expulsion of the Muslim population and other circumstances such as epidemics, favored the establishment and consolidation of a type of extensive agriculture based on large estates.[98] Second, the landed nobility used their political power to illegally usurp lands and monopolize unappropriated or common lands (Vicens Vives 1969; Cabrera Muñoz 1989).

Third, the balance of political power in favor of the powerful groups gave rise to such inefficient institutions as the creation of entailed estates protected by law (*mayorazgos*) and other regulations by which land became non-tradable. On the one hand, the nobility,

[97] The Catholic Kings, unlike their predecessors, did not have to be subject to continuous requests by the nobility. A major difference is that Catholic Kings' predecessors had to provide nobles and military orders with the jurisdictions of the places the latter groups wished as a reward for their participation in the conquest and defense of new territories. In contrast, due to the enormous power and prestige attained after the conquest of Granada, the Catholic Kings were able to organize the distribution of jurisdictions to nobles and military orders based on their own interests (Pérez Boyero 2006).

[98] The previously intensive agriculture of the Guadalquivir Valley dramatically changed after the expulsion of the Moors from Andalusia in 1263, prevailing afterwards an extensive agrarian sector dominated by olive groves and sheep (Vicens Vives 1969; Malefakis 1970). In addition, Muslims occupying Christian lands known as *moriscos* would be also expelled in 1609. In a study of the impact of their expulsion from Valencia, Chaney (2008) finds that it was the creation of more extractive economic institutions rather than lower human capital levels in former *morisco* districts that reduced overall development and in turn the size of their "productive" non-agricultural sector. Chaney and Hornbeck (2013) show that in former *morisco* districts, output fell after the shock but recovered faster than total population over the next 100 years, thus rendering sustained increases in per capita output. They explain this fact on the basis of the persistence and even accentuation of pre-expulsion extractive institutions, which sharply reduced demographic responses to labor scarcity and fostered labor-saving production adjustments through raising farm size and shifting to cash crops cultivation.

one of the major landowners in the country, increasingly began to create entailed estates with the aim to preserve and increase the family domains by avoiding the fragmentation of their patrimony.[99] On the other, communal lands of municipalities and ecclesiastical mortmain contributed to reproducing the initial distribution of assets because all these lands could not be traded. The case of ecclesiastical lands was even more grievous, since they tended to increase over time due to pious donations. Also, the large tracts of land of the military orders could not be sold because they belonged to collegial bodies.[100]

Fourth, jurisdictional rights were hereditary and, therefore, this characteristic guaranteed the persistence in the concentration of *de jure* political power in the hands of the nobility. This situation would be accentuated in some circumstances such as during the state's fiscal crisis in the late sixteenth and seventeenth centuries under the Spanish Habsburg Monarchy. In that situation, the landed aristocracy took advantage of the central state weakness and acquired royal rights of jurisdiction and taxation existing in many formerly royal towns, which would come under noble jurisdiction. This, together with the expansion of their land holdings, would allow them to more effectively oppress the peasantry (Dominguez-Ortiz 1971; Truxillo 2001). According to Dewald (2004), "in Kingdoms such as Sicily, Naples and Castile, the authority of the state was for a time eroded and replaced by that of great noblemen" (pp. 100-101).[101] In those provinces

[99] Since 1505 *Las Leyes de Toro* generalized the practice of establishing *mayorazgos*, an institution by which, *ad eternum*, the entire family heritage must be transmitted to the firstborn, who cannot alienate or sell the property. This fact was even aggravated because entailed estates extended outside the nobility since the sixteenth century. It is difficult to conceive any other institution better designed to perpetuate inequality in the distribution of economic power, which at that time took the form of land.

[100] In contrast, the property of smallholding farmers was constantly threatened. Their frequently unsustainable situation forced them to sell their lands to those who could afford to buy these lands, that is, the aristocracy. This process was evident in such agrarian crises as the one of the beginning of the sixteenth century, which was accompanied by rural depopulation and the spread of hunger (Vicens Vives 1969).

[101] This is just one example that Spanish historiography provides that supports the fact that nobles and military orders were a competing power against the Crown, rather than a simple intermediary between the Crown and the populace. Indeed, before the conquest of Granada, due to the Crown's dependence on the nobility to protect the frontier, the latter used their power to transform royal jurisdictions into noble jurisdictions (Rodríguez Molina 2000). Looking at that phenomenon from the Crown viewpoint, it is also

where nobles and other wealthy groups were very powerful, they used their economic and political power to run *de facto* institutions and control local government to exploit the peasantry through such mechanisms as a land tenure system characterized by short-term leases with a high rent, caps on agricultural wages, overtaxation and severe punishment for property crimes (Dominguez-Ortiz 1955; Herr 1958). They could also use their power to buy and control state offices (Truxillo 2001). The main positions in the town council (*alcalde mayor* and *alguacil mayor*) and an important fraction of the *regidor* positions usually belonged to the high nobility (Cabrera Sánchez 2006). When political reforms introduced elections, initially local "caciques" rigged the elections and, when this became more difficult, they continued to control votes by such methods as vote buying (Malefakis 1970). By coercing rural electors, the landowning class gained parliamentary seats that would help them compensate for the loss in *de jure* political power that in theory the liberal reforms would bring about.[102]

The nineteenth century saw important developments that could have shifted the balance of power in favor of the peasantry. On the one hand, several liberal reforms attempted to change the allocation of *de jure* power by derogating the legal apparatus of the Old Regime. This brought about the suppression of entailed estates and jurisdictional rights, which implied the privatization of the judiciary and local council and many other dues that vassals had to pay to the noblemen. However, in contrast to what happened in other European countries like France, reforms failed to derogate nobles' landownership and hence change the balance of power in society (García-Ormaechea 2002). Rather the opposite, the concentration of land in the hands of the

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easy to find examples of how the Crown and the nobility competed for resources and political power. For instance, important *concejos* under royal jurisdiction in the Extremaduras (particularly Badajoz and Cáceres) were created in the first half of the thirteenth century to limit the excessive power nobles and military orders were acquiring (Mestre-Campi and Sabaté 1998). In similar spirit, Forey (1984, p. 214) notes that "it has been suggested that the favor shown to the military orders helped to free the Spanish monarchies from excessive dependence on the secular nobility [….but] if reliance on the nobility was undesirable, powerful military orders could also constitute a threat to royal authority".

[102] Baland and Robinson (2008) provide a theoretical model and empirical evidence for the case of Chile supporting that, in the presence of secret ballot, those localities with more pervasive patron-client relationships were much more supportive of the right-wing parties, which were traditionally associated with the landed oligarchy.

nobility increased since a large part of the jurisdictional domains became property of the nobles in charge of the jurisdiction (Ruiz-Maya 1979). They used their huge influence to maintain their status as landowners and –therefore– their *de facto* power.[103]

On the other hand, the process of disentailment of communal and ecclesiastical landownership known as *desamortización* aggravated the pattern of land concentration in a few hands (Carrión 1975; Malefakis 1970). Through this process almost all the ecclesiastical and much of the communal land was sold in public auction, thus constituting the second more important historical event (after the Reconquest) affecting land distribution. A huge amount of land changed hands. It has been estimated that around a quarter a million of rural estates were sold, representing ten million hectares (not less than 20 percent of the entire surface of the country) (Simón 1973). Although this was an opportunity to solve or mitigate the problem of land inequality by distributing holdings among the numerous landless workers, the financial needs of the state prevailed and land was bought up by the rich, bourgeois and nobles. The result of this massive sale of land was the accentuation of the previous pattern of land concentration in the hands of a small elite formed by the entrenched landed nobility and a new "capitalist" class of large landholders made up of new riches (Brenan 1943; Carrión 1975).[104]

Finally, it is interesting to observe the existing interaction between the local political power and the country's politics. The landed elite of large estates regions had enough political influence to impose conservative politics and legislation at the central level in favor of their interests. Examples are the existence during the whole modern era of entailed estates protected by law, the maintenance of many feudal rights until well into the nineteenth century, the lack of an effective agrarian reform and their ability to

[103] The situation of villages under noble jurisdiction hardly improved after the derogation of jurisdictional rights. Nobles could transform their feudal rights over land into property rights and villages continued to pay rents to the same persons, not as feudal lords, but as "owners" who could also apply the action of ejectment more frequently than during the Old Regime (Mercader and Dominguez-Ortiz 1972). García-Ormaechea (2002) cites a case of a group of villages in León that, as late as in 1931, continued to pay feudal exactions to a lord.

[104] This class of new riches (bourgeoisie and middle-class urban professionals) –that would pursue profit to a larger extent than feudal landlords– "is the class that since 1843 has held political power in Spain –a middle class enriched not by trade or industry but by ownership of land" (Brenan 1943, p. 109).

conserve their heritage even after the liberal reforms (García-Ormeachea 2002). Conservative country-level politics, although in theory constant across provinces, affected to a larger extent those regions where the concentration of economic and political power was high. In sum, all the aforementioned factors help explain why the pattern of distribution of economic and political power resulting from the Reconquest was so persistent over more than five centuries.[105]

4.3. DATA

We construct a database for the 50 Spanish provinces that contains variables concerning the year of the Reconquest, normalized reconquered area, the concentration of economic power, the concentration of *de jure* political power, current economic development and a wide array of climatic, geographic, topographic and historical controls. As the main indicator of the Reconquest aimed at measuring the conditions and the pace at which the Reconquest was made, we employ the reconquered area by the Crowns of Castile or Aragon in each stage of the Reconquest normalized by the duration in years that each stage lasted for. This duration is calculated as the difference between the dates associated with each of the subsequent lines of frontier depicted in the

[105] Empirical evidence at the provincial level on the persistence of land concentration is not available until the eighteenth century. For previous centuries, we know that by the end of the Reconquest (in 1500) the nobility concentrated 97% of Spanish land, by direct ownership or by jurisdiction. Of this figure, 45% belonged to the Church, councils and urban aristocracy, whereas the remainder belonged to the greatest families of the nobility and represented huge large estates (Vicens Vives 1969). During the sixteenth and seventeenth centuries land concentration remained equal or even accentuated (Reglá 1972a, 1972b). For the eighteenth century, the 1797 population census allows us to draw a clear picture of the situation. In 23 provinces the percentage of landless workers (relative to the agrarian population) exceeded 50% and in 13 of them located in the South it was above two-thirds. This was particularly the case in those regions conquered by Castile since the thirteenth century, where the privileged orders received a large number of land grants. The situation of the landless peasantry in these regions even worsened during the nineteenth century due to the population increase, the disentailment of communal land that deprived them from their use, the loss of the safeguards previously afforded by the Church that also saw their land disentailed and the liberalization of the land market (Brenan 1943; Mercader and Dominguez-Ortiz 1972). Communal land alienation was particularly intense in the South, where oligarchs controlled municipal councils and decided to sell the great majority of the communal land (Malefakis 1970). The fact that the pattern of land concentration persisted into the twentieth century is reflected in the high correlation (0.81) existing between the percentage of landless workers in 1797 and 1956.

map of the Reconquest in Figure 2.[106] Once we estimate the normalized reconquered area in each stage by each Crown, we impute this value to the provinces located in the respective stages. Since the area of a province can partially cover more than one stage of the Reconquest, we calculate the proportion of the province area within each of the respective stages. We then compute the weighted average of the normalized reconquered area of each province, where the weights are given by the percentage of the province area conquered in each stage. As already mentioned, it would have been preferable to have an accurate measure of the involvement of each colonizing group in each stage of the Reconquest (particularly individual settlers vs. nobles and military orders) and the particular allocation of economic and political power to which the Reconquest gave rise, but that information is not historically available. As a result, the use of normalized reconquered area can serve as an approximation of the importance of the powerful groups (particularly the nobility and military orders) during the repopulation process. This is because the amount of reconquered area affected the possibility that either individual settlers or the nobility and military orders gained control of the new territories conquered. As historically documented, a greater area to be repopulated increased the likelihood that nobles and military orders were called up to participate in the repopulation and defense of such vast territories, which would result in large estates and jurisdictional rights granted to these powerful groups.

Our second measure of the Reconquest relates to the timing of this process. As argued above, the later the date of the Reconquest, the greater the role played by the nobility and military orders. We construct the date of the Reconquest as follows. To those provinces whose territories were largely unoccupied by the Muslims, which are located approximately between the Cantabrian Mountains and the Cantabrian Sea, we have assigned the year 711 that corresponds to the date when the Moors invaded the Iberian Peninsula.[107] This captures the fact that from the very beginning these territories were under Christian control. For all the other provinces we take the year when the capital city of the province was conquered by the Christians. When this year is unknown or the city did not exist at that time, we observe the date when the line of the Muslim-Christian

[106] Since the initial resistance area in northern Spain was not conquered by the Muslims and, therefore, not reconquered, we assume the reconquered area to be zero in this initial resistance territory.

[107] These provinces are Álava, Asturias, Cantabria, Guipúzcoa and Vizcaya.

frontier surpasses the current location of the capital city. The main sources of information used for these two variables are Mestre-Campi and Sabaté (1998) and Guichard (2002), among others.

As far as the measurement of *de facto* political power is concerned, we use the percentage of landless workers over the agricultural active population in 1797, which measures the size of the landless workers class relative to land owners and tenants. The class of landless laborers, which can be traced back to the fifteenth century, was a by-product of the concentration of land in the hands of the nobility (Cabrera Muñoz 1989). Figure 3 displays high persistence in our measure of *de facto* political power across the Spanish provinces. It exhibits a highly significant positive relationship between the ratio of landless workers at the end of the 18th century and two measures of *de facto* political power concentration in the 20th century. These include the ratio of landless workers over the total agrarian population in 1956 and the Gini index measuring the concentration of land obtained from the 1972 agricultural census.

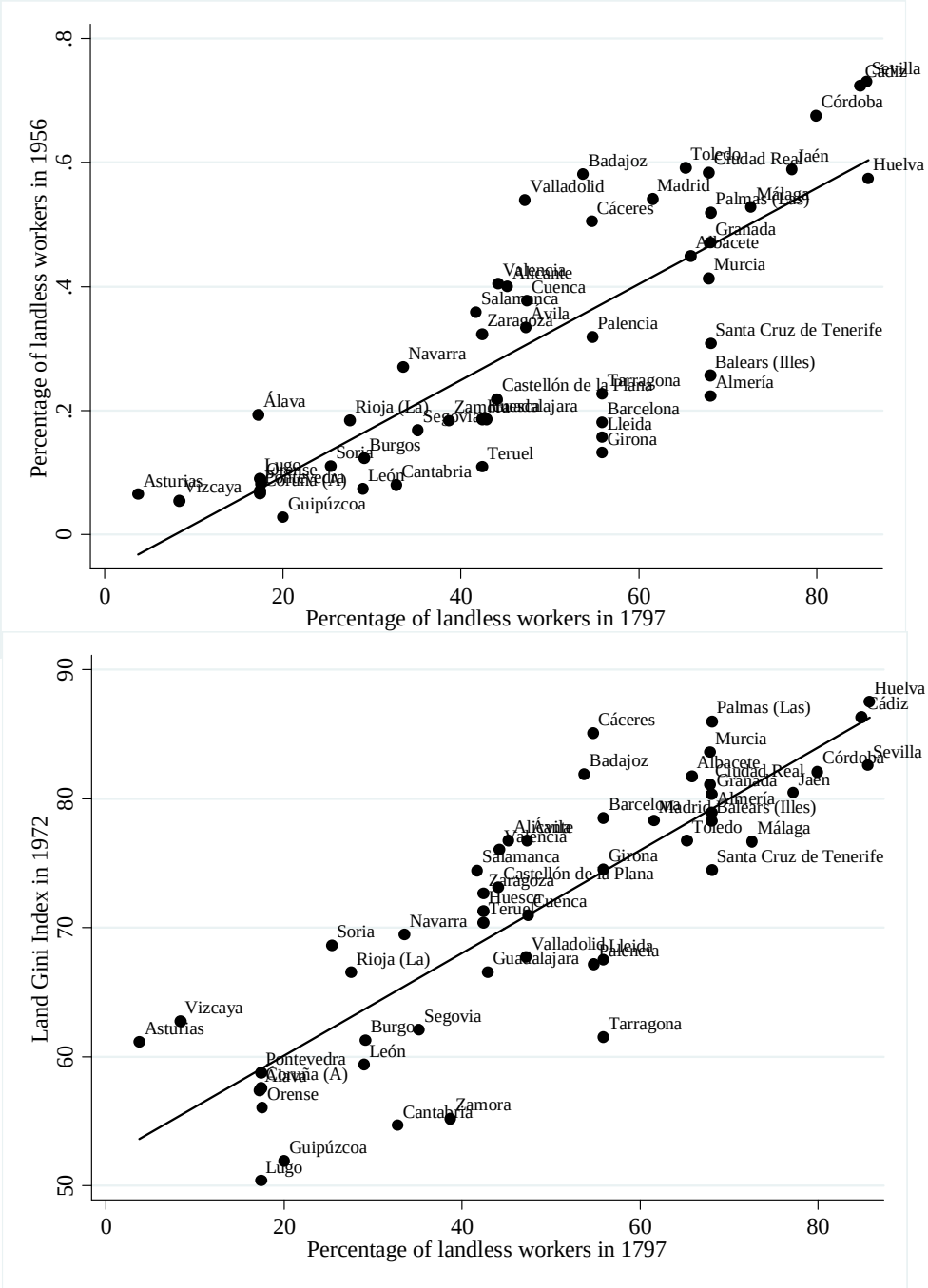


Figure 3. Persistence in *de facto* political power

As regards the concentration of *de jure* political power in the hands of the powerful groups, we employ the percentage of villages and cities under seigneurial jurisdiction that include both noble and military order jurisdiction. For the instrumental variables analysis, we employ a composite measure of political power concentration that comprises both *de facto* and *de jure* political power. This is calculated as the average of

the standardized values of the ratio of landless workers over the total agrarian labor force in 1797 (*de facto* power) and the percentage of villages and cities under seigneurial jurisdiction in 1797 (*de jure* power).[108] Both measures of concentration of *de facto* and *de jure* political power in the hands of the nobility are highly (positively) correlated, as depicted in Figure 4. In sum, our composite indicator can be interpreted as a measure of the concentration of political power in the hands of the nobility versus the peasantry. It is also worth highlighting the high positive correlation existing between our measure of concentration of political power and normalized reconquered area displayed in Figure 5.

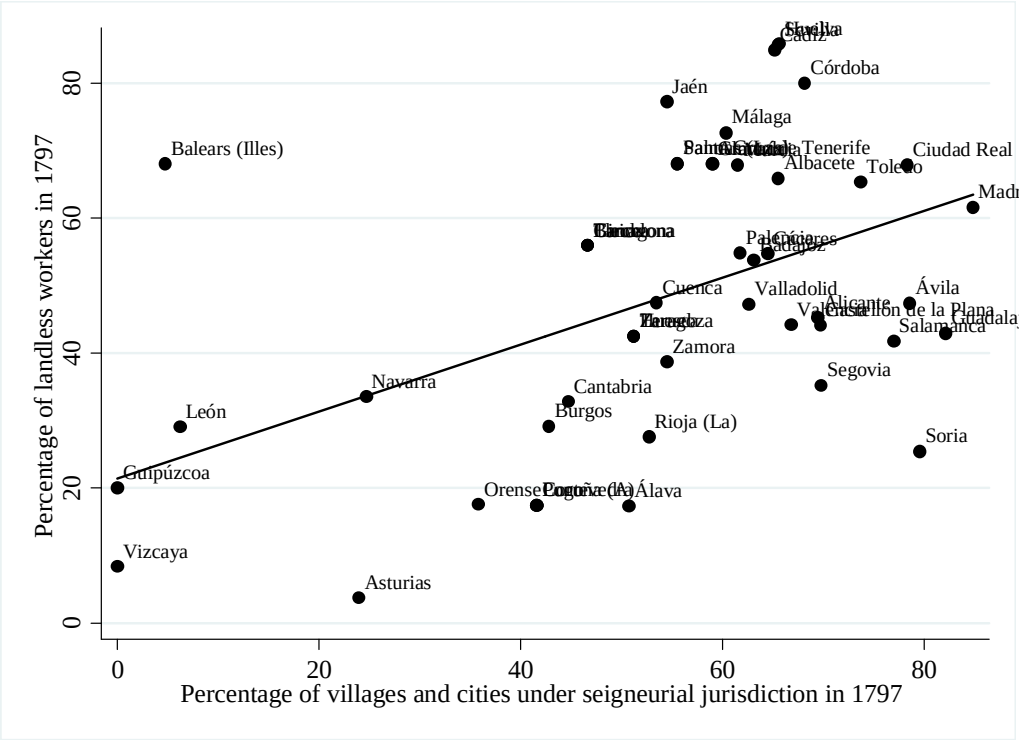


Figure 4. The relationship between *de facto* and *de jure* political power

[108] We proceed in this way because military orders were mostly composed of members of the nobility, with masters (*maestres*) and commanders usually forming part of the higher nobility (Vicens Vives 1969; Mestre-Campi and Sabaté 1998; Alvarez-Palenzuela 2002). Nonetheless, we obtain similar results in the 2SLS analysis if we separate both categories and run principal components on the ratio of landless workers over the agricultural active population in 1797, the percentage of villages and cities under noble jurisdiction in 1797 and the percentage of villages and cities under military order jurisdiction in 1797. These results are available in the unpublished appendix.

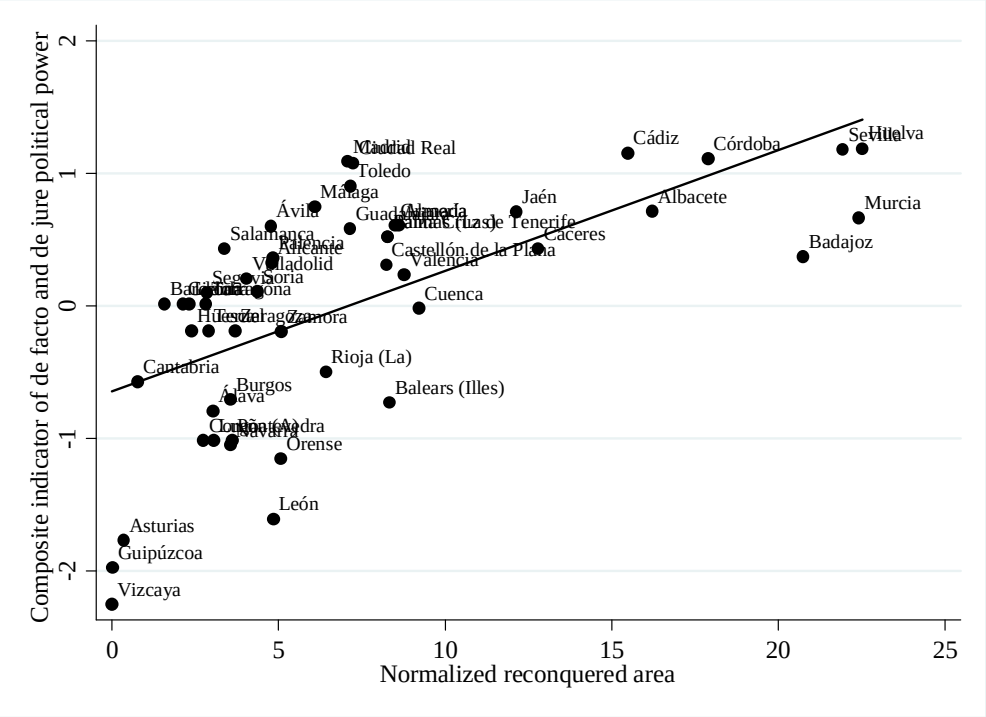


Figure 5. Relationship between reconquered area and political power concentration

Finally, the variable used to measure economic development is GDP per capita in 2005 from the Spanish National Statistics Institute. To save space, the definitions and sources of the remaining variables are presented in the Appendix (Table A1), while the descriptive statistics are reported in the unpublished appendix.

4.4. REDUCED-FORM EFFECT OF THE RECONQUEST ON CURRENT DEVELOPMENT

Table 1 contains the results regarding the reduced-form effect of the Reconquest on current GDP per capita levels. The following equation is estimated with ordinary least squares (OLS) and heteroskedasticity-consistent standard errors:

$$Y_i = \alpha + \beta_1 \cdot Reconquest_i + \beta_2 \cdot X_i + \omega_i \quad (2)$$

where Y_i is log per capita GDP in 2005 in province i, α is a constant term, $Reconquest_i$ stands for our measure of normalized reconquered area, X_i is a vector of control variables and ω_i is the error term. Column 1 of Table 1 reports a highly significant,

negative bivariate relationship between current GDP levels and normalized reconquered area. Our measure of the Reconquest alone can explain 30 percent of the variation in current GDP per capita. This result indicates that the Reconquest is an important determinant of the current distribution of provincial output. We can compare two provinces with large and small reconquered areas to get a sense of the size of the effect of the Reconquest on current GDP per capita. For instance, Barcelona has a level of GDP per capita 48% higher than Seville (24,782 vs. 16,782). The latter has a normalized reconquered area of 21.94, while that for the former is 1.58. The estimate in column 1, –0.018, indicates that Barcelona should be 44% richer than Seville $(e^{0.366} - 1 \approx 0.44)$, which is very close to the real differences in output per capita. This result cannot be taken as conclusive since the presence of unobserved province-level heterogeneity, if correlated with both the Reconquest and current economic development, would introduce an omitted variable bias in the relevant coefficient. Therefore, in the rest of this section we try to exhaustively control for possible factors that may affect current GDP per capita levels.

A first set of controls relates to the biogeographic conditions 10,000 years ago and the transition to early agriculture within the Neolithic Revolution. For that purpose, column 2 introduces the percentage of province area that was subject to wooded steppe versus dry steppe. These were the Neolithic vegetation types (as indicators of soil quality and agricultural suitability) that prevailed in the Iberian Peninsula during the prehistoric period.[109] Column 3 incorporates the predicted date of adoption of early agriculture using the information provided by Pinhasi, Fort and Ammerman (2005) regarding the exact location of thirteen calibrated C-14 dates from Neolithic sites in the Iberian Peninsula.[110] None of the Neolithic controls enters statistically significant for the Spanish provinces, whereas the effect of the Reconquest remains highly significant and largely unchanged in size.

[109] The omitted category in the regression is dry steppe. Wooded steppe entailed a closed forest, including mixed conifer-broad leaved forest; and dry steppe implied sparse vegetation with open wooded vegetation types and a more temperate climate. See Olsson and Paik (2013) for more details.

[110] Olsson and Paik (2013) use this data source to analyze the effect of the early transition to agriculture on current development in the western agricultural core.

A second set of controls accounts for historical conditions that may affect the current distribution of provincial output. Column 4 introduces a dummy variable capturing whether the province belonged to the Crown of Aragon, since repopulation in Aragon had such particularities as a higher concern about maintaining irrigation structures, a greater respect for the Muslim population and that the aristocracy was less rewarded than in the case of Castile (Casado-Alonso 2002; Vicens Vives 1969). In addition, it is possible that other institutional characteristics of this former kingdom matter for economic development. The dynastic union between the Crown of Aragon and Castile took place in 1469 with the marriage of the Catholics Kings, but Aragon preserved its legal system and institutions until the War of Spanish Succession at the beginning of the eighteenth century. Arguably, these particularities during this early period could influence subsequent economic activity. Even though this historical control appears highly significant and positively related to current development levels, its inclusion does not affect our baseline results. Column 5 introduces a dummy variable for the capital city of Spain in order to control for the fact that the good economic performance of this province may be driven by its special administrative character.[111] As expected, the coefficient on Madrid appears highly significant and positive.

We next control for various climatic, geographic and topographic factors that may be omitted from the baseline specification. Many scholars consider geography as an important determinant of economic development (Gallup et al. 1999; Sachs 2003). Following AJR (2002), we can differentiate between simple and sophisticated geographical explanations. The first type considers factors such as climate (with effects on work effort), soil fertility or diseases. It predicts persistence in economic outcomes since geographic factors are time-invariant. Sophisticated geographical hypotheses are more appealing because they allow for the possibility that some geographic factors have a changing economic role over time. Applied to the Spanish case, perhaps access to the Mediterranean Sea was more decisive during the Middle Ages, subsequently access to the Atlantic due to the American trade and more recently during the industrialization

[111] In addition to concentrating the government bureaucracy, which represents a flow of rents to their inhabitants, Madrid is the center of the radial communication network of Spain as a characteristic of traditional government centralism (Herr 1958). This provides the capital of Spain with a privilege position for business location.

period access to the Cantabrian Sea. In addition, coal reserves played an important role during the industrialization period, but not all provinces had such reserves. Transportation costs –measured, for instance, through access to the sea or distance from major trading partners and industrial centers in Europe– could also be more important during the nineteenth century when commercial relations among regions and countries intensified. In order to dispel doubts, columns 6 to 30 of Table 1 control for factors that may be associated with both sets of geographical hypotheses. We begin with factors exhibiting geographic variation along a North-South gradient that mimics the direction of the Reconquest. They, thus, constitute confounding factors and a threat to identifying the genuine effect of the Reconquest. The incorporation of latitude into column 6 (which enters insignificant) does not affect the statistical significance and the size of the effect of the Reconquest on current development.

Columns 7 to 9 control for variables like temperature, rainfall and humidity that may also affect soil quality and the suitability of the soil for crops that require large estates (and in turn induce the concentration of economic power in the hands of the landed elite). Higher aridity and less rain may also require a higher concentration of land on economic efficiency and profitability grounds (Brenan 1943). Hence, they may be confounding factors with the long-term effect of the Reconquest on development. It is worth highlighting that none of these factors either enters significant or reduces the statistical significance of the effect of the Reconquest.[112] The baseline result remains unaltered when column 10 introduces a direct measure of soil quality constructed on the basis of several dimensions (nutrient availability and retention capacity, rooting conditions, oxygen availability to roots, excess salts, toxicity and workability) from FAO data, though this variable enters with a highly significant and positive coefficient. Columns 11 to 13 exploit provincial variation in the suitability of land for such cash crops as sugar, cotton and tobacco in order to capture the possibility of a contrast in the suitability of land for large plantations in the South of Spain as opposed to the North (as in the US). It is worth noting that none of these three controls either appears statistically significant or affects the baseline results. The introduction in columns 14 and 15 of average altitude and its coefficient of variation as a measure of terrain ruggedness does

[112] Only humidity does slightly reduce the size of the relevant coefficient from –0.018 to –0.015.

not alter the baseline results. Only the former is found marginally significant and with a negative coefficient.

Columns 16 to 26 in Table 1 control for geographic attributes related to transportation costs that include access to the Mediterranean Sea, the Atlantic Ocean and the Cantabrian Sea, a dummy indicator for being an island, a coast dummy, coast length over surface area, distance to the coast, border with Portugal, distance from Madrid, distance from London and distance from Paris. Of all these controls, only distance to the coast and border with Portugal are statistically significant and negatively associated with current development. Most importantly, the reduced-form effect of the Reconquest remains fairly robust to these additions. Columns 27 to 30 control for indicators accounting for natural resources endowments that include the percentage of arable land, log mining output in 1860, a coal dummy in 1860 and log coal output in 1860. Only provincial mining output does appear statistically significant and with a positive coefficient, whereas the baseline results remain unaltered.

TABLE 1 - REDUCED-FORM EFFECT OF THE RECONQUEST ON CURRENT DEVELOPMENT

Dependent variable is log GDP per capita in 2005

Panel A

		Neolithic controls		*Historical controls*		*Climatic, geographic and topographic factors*									
	Basic relation-ship	Wooded steppe (% area)	Years since transition to agriculture	Crown of Aragon	Madrid	Latitude	Tempera-ture	Rainfall	Humidi-ty	Soil quality	Land suitabili-ty for sugar	Land suitabili-ty for cotton	Land suitabili-ty for tobacco	Altitude (average)	Altitude (cv)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Reconquered area	-0.018***	-0.019***	-0.018***	-0.016***	-0.018***	-0.017***	-0.02***	-0.019***	-0.015***	-0.023***	-0.019***	-0.02***	-0.018***	-0.019***	-0.019***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)	(0.006)	(0.004)	(0.004)	(0.003)
Additional control		-0.046	0.0001	0.139***	0.356***	0.006	0.005	0.0000	0.006	0.369***	0.001	0.000	0.000	-0.0001*	0.097
		(0.055)	(0.001)	(0.044)	(0.023)	(0.006)	(0.007)	(0.00008)	(0.007)	(0.076)	(0.002)	(0.000)	(0.000)	(0.000)	(0.062)
R^2	0.30	0.31	0.30	0.38	0.36	0.31	0.30	0.30	0.32	0.46	0.30	0.30	0.30	0.33	0.33
Number of observations	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Panel B

	Geographic controls related to transportation costs											*Natural resources endowments*			
	Medite-rranean Sea	Atlantic Ocean	Cantabrian Sea	Island	Coast Dummy	Coast length/ surface area	Distance to the coast	Border with Portugal	Distance from Madrid	Distance from London	Distance from Paris	Arable land (%)	Mining output in 1860	Coal dummy in 1860	Coal output in 1860
	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
Reconquered area	-0.019***	-0.018***	-0.019***	-0.019***	-0.018***	-0.018***	-0.018***	-0.016***	-0.018***	-0.016***	-0.015***	-0.018***	-0.019***	-0.018***	-0.018***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)	(0.004)	(0.004)
Additional control	0.079	-0.026	-0.020	0.08	0.038	0.329	-0.047*	-0.164***	0.002	-0.007	-0.010	-0.069	0.007**	0.061	0.003
	(0.055)	(0.059)	(0.087)	(0.066)	(0.048)	(0.307)	(0.028)	(0.054)	(0.004)	(0.005)	(0.007)	(0.147)	(0.003)	(0.053)	(0.005)
R^2	0.33	0.30	0.30	0.31	0.31	0.31	0.35	0.38	0.30	0.32	0.33	0.3	0.35	0.31	0.3
Number of observations	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

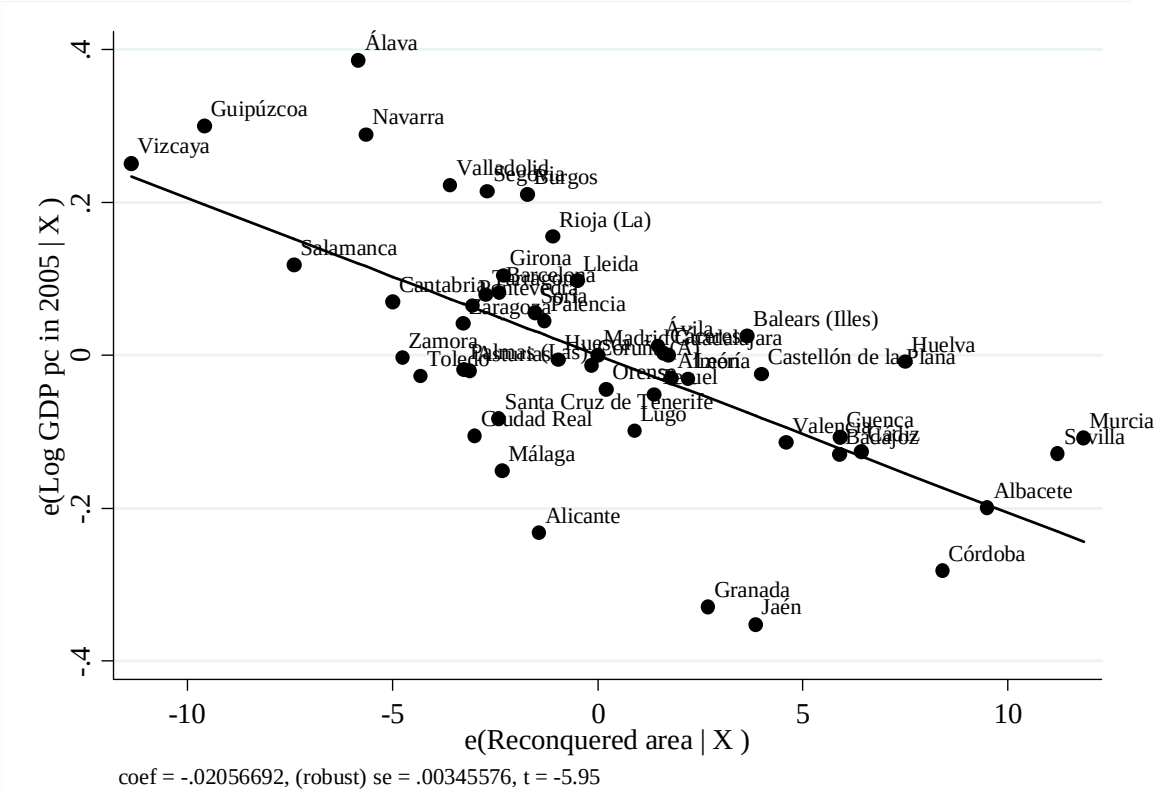
Notes: Variables descriptions are provided in Table A1. The estimations include a constant term, which is omitted for space considerations. Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.

Finally, in Table 2 we include in the same specification all the controls that are found individually significant. Even in this case, the coefficient on the Reconquest measure appears significant at the 1% level and its size is not reduced. Besides, the dummies 'Crown of Aragon' and Madrid, soil quality and log mining output in 1860 continue to be statistically significant and positively associated with current development. These results are robust to removing outliers detected with the following procedures: leverage, standardized residuals, studentized residuals, Cook's distance and DFITS. Likewise, they remain unchanged when the provinces forming the core of initial resistance, for which normalized reconquered area was assumed to be zero, are excluded from the analysis. The strength of the reduced-form effect of normalized reconquered area on current development can also be illustrated in Figure 6 that presents a scatterplot of the two variables, after conditioning on the set of individually significant controls (as in column 1, Table 2).

TABLE 2 - REDUCED-FORM EFFECT OF THE RECONQUEST ON CURRENT DEVELOPMENT: ROBUSTNESS CHECKS

Dependent variable is log GDP per capita in 2005					
		Leverage	Standard. residuals/ Student. residuals	Cook's distance/ Dfits	Initial resistance provinces removed
	(1)	(2)	(3)	(4)	(5)
Reconquered area	-0.021***	-0.021***	-0.018***	-0.021***	-0.017***
	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
Crown of Aragon	0.094**	0.094**	0.12***	0.086**	0.127**
	(0.041)	(0.041)	(0.033)	(0.041)	(0.047)
Madrid	0.434***	n.a.	0.432***	0.431***	0.441***
	(0.055)	n.a.	(0.049)	(0.053)	(0.052)
Distance to the coast	-0.035	-0.035	-0.05*	-0.044	-0.032
	(0.031)	(0.031)	(0.026)	(0.027)	(0.028)
Border with Portugal	-0.014	-0.014	-0.021	-0.045	-0.03
	(0.047)	(0.047)	(0.041)	(0.04)	(0.048)
Altitude (average)	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Soil quality	0.327***	0.327***	0.316***	0.307***	0.235***
	(0.082)	(0.081)	(0.074)	(0.083)	(0.084)
Mining output in 1860	0.005*	0.005*	0.006**	0.005*	0.004
	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)
R^2	0.66	0.64	0.78	0.71	0.65
Number of observations	50	49	46	48	45

Notes: Variables descriptions are provided in Table A1. The estimations include a constant term, which is omitted for space considerations. Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively. Outliers are the following: Column 2, Madrid; Column 3, Alicante, Granada, Jaén and Álava; Column 4, Granada and Huelva. Initial resistance provinces in column 5 are Asturias, Cantabria, Guipúzcoa, Vizcaya and Álava.



coef = -.02056692, (robust) se = .00345576, t = -5.95

Figure 6. Conditional relationship between reconquered area and current GDP per capita

4.4.1. Municipality-level Analysis

Although the relationship between reconquered area and current GDP appears robust to the inclusion of many geographic and historical controls as well as to the removal of outliers, a possible concern is that some unobservable province-level characteristics are driving this result. One way to address this concern is to conduct the analysis at a finer level, namely using municipalities' data, and test if the results hold even conditional on province fixed effects. This test is quite strong and allows us to exploit within-province variation in the conditions surrounding the Reconquest. The inclusion of such powerful province-specific fixed effects enables us to explicitly account for any systematic and structural particularities related to the history of each province, which cannot be controlled explicitly in province-level analysis. For this exercise, we create a dataset of more than 8,000 municipalities. We impute to each municipality the reconquered area corresponding to the Reconquest phase to which the municipality belongs. As proxies for income at the local level we employ average socioeconomic condition, average number of vehicles per household and labor force activity rate, which appear clearly

linked to economic development. This is corroborated by the existence of a high correlation with GDP per capita at the provincial level (correlation is 0.81 with average socioeconomic condition, 0.54 with average number of vehicles per household and 0.73 with labor force activity rate).

Table 3 presents the results with standard errors being clustered at the province level. All regressions include province dummies. Columns 1, 3 and 5 show that reconquered area at the municipal level appears negatively associated with the three proxies for local economic development at the 1% significance level after incorporating municipalities' total population to control for differences in municipalities' size, latitude and geographic factors related to transportation costs such as distance to Madrid, distance to the coast and distance to the nearest province capital (in linear and square form) and a provincial capital dummy. In columns 2, 4 and 6 we further incorporate additional municipalities' climatic, geographic and topographic variables to the control set. These include altitude, annual average temperature, annual rainfall and seven dimensions measuring soil quality (nutrient availability and retention capacity, rooting capacity, oxygen availability to roots, excess salts, toxicity and workability). The inclusion of all these controls together, along with the province-level fixed effects, is particularly important here. This is because with only 50 observations in the province-level analysis we could not control for all individual regressors together, since the degrees of freedom would dramatically fall. Instead, we opted for including in the same specification only those regressors that were found individually significant. Turning now to the results obtained from the municipality-level analysis, it is worth highlighting that the baseline reduced-form effect of the Reconquest remains statistically significant in all cases. This alleviates our concern that unobserved heterogeneity at the province level might be the driving force behind the significant effect of the Reconquest on current development levels in the province-level analysis.

TABLE 3 - MUNICIPALITY-LEVEL ANALYSIS: PROVINCE FIXED-EFFECTS REGRESSIONS

Dependent variable is log GDP per capita in 2005

	Average socioeconomic condition		*Average number of vehicles per household*		*Labor force activity rate*	
	(1)	(2)	(3)	(4)	(5)	(6)
Reconquered area	-0.149**	-0.14**	-0.005**	-0.004*	-0.131***	-0.127***
	(0.068)	(0.069)	(0.002)	(0.002)	(0.042)	(0.038)
Population (log)	-0.112	0.387*	0.006	0.004	-0.377***	-0.213**
	(0.222)	(0.206)	(0.011)	(0.01)	(0.107)	(0.103)
Latitude	4.641***	2.929***	0.046	0.058**	0.943	0.525
	(1.155)	(0.946)	(0.03)	(0.028)	(0.591)	(0.576)
Distance to Madrid	0.021	0.008	0.000	0.000	0.007	0.007
	(0.02)	(0.019)	(0.001)	(0.001)	(0.009)	(0.009)
Distance to Madrid squared	0.000	0.000	0.000	0.000	0.000	-0.00001*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Distance to the coast	0.008	-0.047*	0.000	0.000	0.012	-0.01
	(0.03)	(0.025)	(0.001)	(0.001)	(0.015)	(0.015)
Distance to the coast squared	0.000	0.0002***	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Distance to the nearest capital	-0.184***	-0.219***	-0.007***	-0.006***	-0.049***	-0.056***
	(0.037)	(0.033)	(0.001)	(0.001)	(0.013)	(0.012)
Distance to the nearest capital squared	0.001***	0.001***	0.00004***	0.00003***	0.0003***	0.0003***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Provincial capital dummy	1.704	-0.209	-0.246***	-0.227***	1.47**	0.947
	(1.187)	(1.212)	(0.05)	(0.049)	(0.598)	(0.582)
Altitude		0.007***		0.0001**		0.003***
		(0.001)		(0.000)		(0.001)
Nutrient availability		-0.91		0.011		0.05
		(0.616)		(0.017)		(0.424)
Nutrient retention capacity		1.145		0.026		0.243
		(0.811)		(0.02)		(0.39)
Rooting conditions		-0.422		0.027**		-0.008
		(0.424)		(0.01)		(0.196)
Oxygen availability to roots		0.564		0.007		-0.885*
		(0.814)		(0.022)		(0.521)
Excess salts		0.702		0.006		0.824*
		(0.657)		(0.013)		(0.465)
Toxicity		0.864		-0.013		0.233
		(0.639)		(0.026)		(0.257)
Workability		0.464		-0.005		0.57**
		(0.462)		(0.014)		(0.226)
Annual average temperature		-0.043		0.002***		-0.021
		(0.027)		(0.001)		(0.017)
Annual rainfall		0.005		0.000		0.001
		(0.004)		(0.000)		(0.002)
Province dummies	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.58	0.60	0.52	0.53	0.23	0.24
Number of observations	8098	8041	8098	8041	8098	8041

Notes: Variables descriptions are provided in Table A1. The estimations include a constant term and province dummies, which are omitted for space considerations. Robust standard errors clustered at the provincial level are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.

4.5. CONCENTRATION OF POLITICAL POWER AND CURRENT DEVELOPMENT: 2SLS RESULTS

In the previous section we provided strong evidence of a positive long-term effect of the Reconquest on current GDP per capita levels in the Spanish provinces. We explained these results on the basis of the fact that in different stages of the Reconquest the groups involved in the process received different allocations of economic and political power, which varied across the Spanish provinces and ultimately influenced their pattern of development. Therefore, by using the conditions associated with each stage of the Reconquest, we will be able to identify the exogenous variation in the concentration of political power in the hands of the powerful groups, particularly the nobility, and better establish its long-term effect on current economic development.

To operationalize our identification strategy, we need to employ a suitable measure of the concentration of economic and political power in the hands of the powerful nobility, as an indicator of their unequal distribution in society. For that purpose, we use the average of the standardized values of the following indicators: the ratio of landless workers over the total agrarian labor force in 1797 (*de facto* power) and the percentage of villages and towns under seigneurial jurisdiction in 1797 (*de jure* power). According to our theory, what lies between the Reconquest and current development is the specific configuration of *de facto* and *de jure* political power that determines the type of political institutions and the way resources are distributed in society. Therefore, our identification strategy based on 2SLS is simple. In a first stage, we try to explain the degree of concentration of *de facto* and *de jure* political power on the basis of the timing and conditions in the Reconquest.

$$political\ \ power\ concentration_i = \gamma_0 + \gamma_1 \cdot \mathrm{Re}\, conquest_i + X_i^{'}\beta + \varepsilon_i \qquad (3)$$

where *political power concentration*$_i$ is our measure of *de facto* and *de jure* political power in province *i*. *Reconquest*$_i$ stands for normalized reconquered area and the Reconquest year, which is used as an additional instrument needed to compute the overidentification test. X_i represents the set of exogenous variables that were found to be individually significant in reduced-form estimation. It includes historical, geographic and natural resources endowment indicators: 'Crown of Aragon' and Madrid dummies,

distance to the coast, border with Portugal, altitude, soil quality and log mining output in 1860. ε_i is the error term.

In a second stage, we regress current GDP per capita on our measure of political power concentration and the set of exogenous controls, such that:

$$GDP_i = \delta_0 + \delta_1 \cdot political\ \ power\ concentration_i + X_i^{'}\varphi + \nu_i \qquad (4)$$

Normalized reconquered area and the Reconquest year are considered exogenous regressors employed to extract the exogenous component of the concentration of *de facto* and *de jure* political power. As such, they are excluded from the second-stage regression. Key to the validity of the instrumental variables approach are that (i) the Reconquest measures need to be strongly correlated with the concentration of political power and (ii) that our instruments must be uncorrelated with any of the determinants of current economic development as follows: $corr(\mathrm{Re}\,conquest_i, \nu_i) = 0$. The exclusion restriction entails that, conditional on the exogenous controls included in the regression, the Reconquest affects current development only through its impact on the concentration of economic and political power in the hands of the landed elite. The result of this test is provided for the specification in which both normalized reconquered area and the Reconquest year are used as instruments, since the model using our preferred instrument (normalized reconquered area) is exactly identified.

The advantages of instrumental variables estimation versus OLS is that it helps deal with the endogeneity associated with measures of the concentration of political power, the omitted variables bias and the attenuation bias caused by classical measurement error in the measures of power concentration, thereby rendering potentially consistent estimates (AJR 2002). A further advantage is that it allows us to provide a test of the hypothesis that the long-term impact of the Reconquest on current economic development worked through the unequal distribution of economic and political power to which the later stages of the Reconquest gave rise.

The results of the first stage are presented in Panel B of Table 4 for the case in which normalized reconquered area and the Reconquest year are employed as alternative instruments for the concentration of political power (columns 2 and 3) and the case in which both instruments are included together (column 4). In all first stages, the

respective instruments are positively correlated with the concentration of political power at the 1% significance level. This is consistent with the fact that the larger the area that needed to be repopulated and the later a province was reconquered, the more likely it is that the powerful groups, in particular the nobility, were granted large estates and jurisdictional rights.[113] Regarding the exogenous controls included, Madrid and higher distance to the coast favored the concentration of political power in the hands of the landed nobility. In the bottom part of the table we can observe that the partial R^2 associated with the instruments is 0.46 for reconquered area, 0.49 for the Reconquest year and 0.58 for the specification with both instruments. Besides, the *F*-statistic largely exceeds the "rule-of-thumb" value of 10 (Staiger and Stock 1997), which indicates the absence of a weak instrument problem.

Turning now to the 2SLS estimate of the effect of the concentration of political power on current development, Panel A of Table 4 shows strong evidence of a highly significant negative effect in all specifications. The impact of normalized reconquered area working through the composite indicator of *de facto* and *de jure* political power on current GDP per capita is not trivial. For instance, if we consider the specification in column 2 (Table 4), increasing normalized reconquered area one standard deviation (5.94) should reduce GDP per capita by $5.94*\gamma_1*\delta_1$, where γ_1 is the effect of normalized reconquered area on political power concentration and δ_1 is the effect of political power concentration on GDP per capita. Thus, the estimated effect of reconquered area on output per capita running through *de facto* and *de jure* political power is 5.94*0.092*(–0.223) = –0.122, which implies a reduction in GDP per capita of about 12%. Remarkably, this appears very similar to the reduced-form effect of reconquered area on GDP per capita from a comparable specification (Table 2, column 1) which equals -0.125 (obtained by multiplying the coefficient on normalized reconquered area times the standard deviation of this variable, i.e., (–0.021)*5.94). This confirms that the reduced-

[113] If, instead of using the composite indicator, we employ the two variables of *de facto* and *de jure* political power separately, we obtain results congruent with the fact that the Reconquest gave rise to greater concentration of economic and political power in the hands of the nobility, as reflected in the ratio of landless workers and the percentage of villages and towns under seigneurial jurisdiction. For the sake of conserving space, these results are presented in the unpublished appendix.

form effect of the Reconquest on current development works through the concentration of political power in the hands of the landed elite.

The 2SLS estimate is larger in absolute terms than the OLS estimate reported in column 1 by at least 40% (–0.223 vs. –0.157). This indicates that classical measurement error in the indicator of political power concentration creates attenuation bias, which biases the relevant coefficient downwards. Of all the exogenous controls included, only the 'Crown of Aragon' and Madrid dummies as well as soil quality are statistically significant and positively related to current development. The bottom row in column 4 provides the *p-value* from the χ^2 over-identification test for the specification with two instruments, which serves as a general test for their overall validity. The result of the test appears to favor our identification strategy, as we clearly fail to reject the null hypothesis that the instruments can be excluded from the second stage regression even at the 10% level. This strongly suggests that the timing and conditions of the Reconquest may affect current economic development via the concentration of political power in the hands of the landed elite that used their power to create extractive institutions to exploit the landless peasantry.

TABLE 4 -2SLS RESULTS

Dependent variable is log GDP per capita in 2005

	OLS results	*Baseline 2SLS results*	*Using an alternative instrument: Reconquest year*	*Using two instruments: Overidentification test*
	(1)	(2)	(3)	(4)
Panel A: Second stage results				
Political power concentration	-0.157***	-0.223***	-0.256***	-0.240***
	(0.026)	(0.046)	(0.055)	(0.048)
Crown of Aragon	0.173***	0.177***	0.18***	0.179***
	(0.042)	(0.049)	(0.053)	(0.051)
Madrid	0.555***	0.596***	0.617***	0.607***
	(0.044)	(0.05)	(0.054)	(0.051)
Distance to the coast	-0.009	0.012	0.023	0.018
	(0.025)	(0.029)	(0.033)	(0.031)
Border with Portugal	-0.074	-0.059	-0.051	-0.055
	(0.056)	(0.067)	(0.075)	(0.071)
Altitude (average)	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Soil quality	0.399***	0.526***	0.59***	0.56***
	(0.086)	(0.122)	(0.148)	(0.132)
Mining output in 1860	0.002	0.001	0.000	0.001
	(0.003)	(0.003)	(0.003)	(0.003)
Panel B: First stage results				
Reconquered area		0.092***		0.053***
		(0.019)		(0.018)
Reconquest year			0.247***	0.156***
			(0.048)	(0.045)
Crown of Aragon		0.376*	0.022	0.215
		(0.205)	(0.214)	(0.211)
Madrid		0.725***	0.373**	0.523***
		(0.193)	(0.159)	(0.159)
Distance to the coast		0.211*	0.397***	0.307***
		(0.118)	(0.095)	(0.101)
Border with Portugal		-0.201	0.024	-0.15
		(0.22)	(0.234)	(0.219)
Altitude (average)		0.000	0.000	0.000
		(0.000)	(0.000)	(0.000)
Soil quality		0.893**	0.461	0.404
		(0.412)	(0.465)	(0.402)
Mining output in 1860		-0.02*	0.006	-0.005
		(0.011)	(0.012)	(0.01)
Partial R^2		0.46	0.49	0.58
F- statistic		24.54	25.89	18.53
R^2	0.68	0.67	0.69	0.74
Number of observations	50	50	50	50
Overid. test (p-value)				[0.3277]

Notes: Variables descriptions are provided in Table A1. The estimations include a constant term, which is omitted for space considerations. Robust standard errors are in parentheses. Small-sample correction for standard errors is applied in 2SLS regressions. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.

4.6. THREATS TO IDENTIFICATION

The overidentification strategy implemented in the previous section appears to favor the validity of our instruments, since the null hypothesis of the overidentification test could not be rejected and the 2SLS effect of the Reconquest working through the concentration of political power was very close to the reduced-form effect. Notwithstanding, we are aware of the fact that ruling out the possibility that the Reconquest is uncorrelated with any unobserved determinants of current development is practically impossible. Therefore, we next take two avenues to try to improve the validation and credibility of the identification strategy. First, we provide a falsification exercise to show that the Reconquest does not appear to be statistically related to the level of economic development and other outcomes across the Spanish provinces in the pre-Reconquest era. Second, as a further check that the Reconquest has no effect on long-run development through other channels than the concentration of political power, we control for alternative channels –in addition to the wide array of historical and geographic controls already included. If after these checks, the Reconquest neither exerts an influence on pre-Reconquest development nor affects current output levels through other alternative channels (which would violate the exclusion restriction), then the evidence would support that the historical accident given by the Reconquest is as good as if it was randomly assigned.

4.6.1. Falsification Test

A main threat to our identification strategy is the possibility that a) the Christian kingdoms chose to conquer first more developed areas or territories with more economic potential and left the conquest of less attractive places for later stages, and b) that areas conquered later resulted in higher concentration of economic and political power because they are intrinsically poor, with *latifundia* being the most viable system in poor regions. In other words, if those areas conquered later –that feature a more pervasive distribution of economic and political power in society– were worse off even before the Reconquest, then there must be other factors than the concentration of political power resulting from the Reconquest responsible for these differences. It is very unlikely though that the chronology of the Christian conquests hinged on the economic potential of the territories. Rather, the military campaigns of the Reconquest

followed a logical order from North to South, due to the simple fact that the original Christian resistance core was in the North.

We try to verify that our indicators of the Reconquest do not exhibit a statistically significant association with economic development and other outcome variables before the Reconquest. We measure pre-Reconquest development through city population in 800 and urban population density in 800, which is the earliest year for which urban population data are available.[114] Given that by this year, the Reconquest had hardly begun, it serves our purpose. It is worth highlighting that neither normalized reconquered area nor the Reconquest year appears significantly related to either city population in 800 or urban population density in 800 (see columns 1 and 2 in Panels A and B of Table 5). In columns 3 to 6, we consider additional outcome indicators that can be related to pre-Reconquest development. These include years since transition to agriculture, the ratio of the number of locations where coinage of imperial coins was made to surface area, roman roads density and the ratio of the number of bishoprics circa 600 to surface area. Again, neither reconquered area nor Reconquest year are significantly related to any of these four pre-Reconquest variables. The above findings support the hypothesis that the Reconquest is "econometrically exogenous". They also suggest that neither the effect of the Reconquest merely represents the perpetuation of economic development differences that already existed before the Reconquest nor that the Christians systematically expanded into specific areas to exploit pre-existing economic advantages.

[114] In this regard, we follow Bairoch (1988), de Vries (1976) and more recently AJR (2002), who argue that urbanization is a good proxy for economic development, since urban societies require an advanced agriculture and a developed transport infrastructure.

TABLE 5 - FALSIFICATION TEST: THE EFFECT OF THE RECONQUEST ON PRE-RECONQUEST DEVELOPMENT

Dependent variable:	City population in 800	Density of urban population in 800	Years since transition to agriculture	Coinage of imperial Roman coins over surface area	Roman roads density	Number of bishoprics over surface area
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Reconquered area						
Reconquered area	1.661	0.123	-0.638	0.004	0.459	0.004
	(1.071)	(0.078)	(0.992)	(0.002)	(0.35)	(0.002)
Crown of Aragon	0.423	-0.045	5.732	0.031	8.084	0.085
	(3.575)	(0.242)	(13.07)	(0.037)	(6.97)	(0.053)
Madrid	-21.26*	-1.42	5.548	-0.046	5.676	0.033
	(12.077)	(0.872)	(10.255)	(0.035)	(5.998)	(0.031)
Distance to the coast	7.89	0.504	-10.508*	-0.003	-0.419	-0.008
	(4.992)	(0.361)	(5.976)	(0.015)	(2.916)	(0.021)
Border with Portugal	-14.944	-1.238	-31.101*	-0.037	11.27**	-0.047
	(12.649)	(0.916)	(16.173)	(0.023)	(5.397)	(0.036)
Altitude (average)	-0.019	-0.001	0.047**	0.000	0.006	0.000
	(0.014)	(0.001)	(0.018)	(0.000)	(0.01)	(0.000)
Soil quality	-6.535	-0.558	-26.345	0.054	-0.082	-0.073
	(8.966)	(0.657)	(19.29)	(0.051)	(11.581)	(0.065)
Mining output in 1860	0.295	0.014	-0.07	0	0.421	0.001
	(0.324)	(0.023)	(0.708)	(0.002)	(0.356)	(0.002)
R^2	0.22	0.22	0.29	0.14	0.15	0.15
Number of observations	50	50	50	50	50	50
Panel B: Reconquest year						
Reconquest year	2.79	0.207	0.804	0.005	0.309	0.007
	(1.755)	(0.129)	(2.325)	(0.005)	(1.074)	(0.008)
Crown of Aragon	-5.603	-0.492	7.659	0.018	6.514	0.072
	(6.085)	(0.437)	(13.981)	(0.037)	(6.554)	(0.053)
Madrid	-25.904	-1.765	5.412	-0.056	4.866	0.022
	(15.713)	(1.14)	(11.712)	(0.038)	(6.001)	(0.034)
Distance to the coast	10.695	0.712	-10.973*	0.003	0.206	-0.001
	(6.808)	(0.493)	(6.45)	(0.018)	(2.947)	(0.021)
Border with Portugal	-9.479	-0.834	-34.827*	-0.025	13.181**	-0.037
	(9.398)	(0.66)	(17.323)	(0.021)	(5.362)	(0.034)
Altitude (average)	-0.033	-0.002	0.05**	0.000	0.003	0.000
	(0.021)	(0.002)	(0.019)	(0.000)	(0.01)	(0.000)
Soil quality	-4.526	-0.413	-38.261	0.062	3.217	-0.077
	(8.483)	(0.625)	(23.384)	(0.055)	(12.587)	(0.077)
Mining output in 1860	0.64	0.04	-0.066	0.001	0.483	0.002
	(0.485)	(0.036)	(0.762)	(0.002)	(0.375)	(0.002)
R^2	0.15	0.15	0.28	0.11	0.12	0.14
Number of observations	50	50	50	50	50	50

Notes: Variables descriptions are provided in Table A1. The estimations include a constant term, which is omitted for space considerations. Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.

4.6.2. Alternative Theories

We next complement the baseline 2SLS analysis, which already included some historical controls and a wide array of indicators that helped control for simple and more sophisticated versions of the geography hypothesis. For that purpose, we consider alternative channels to the concentration of political power in the hands of the landed nobility. We present the 2SLS results for the case of normalized reconquered area as the only instrument and that in which both reconquered area and the Reconquest year are

used as instruments, which enables us to provide the outcome of the overidentification test. We focus the discussion on the former case, which is presented in Panel B of Table 6, whereas the latter is reported in Panel C. The additional variables proxying for alternative channels are included as exogenous regressors. To the extent that, as shown in Panel A of Table 6, the Reconquest does not exert any significant impact on these channels, this strategy may be appropriate.

We first try to control for historical differences in culture and levels of human capital across provinces by including the proportion of Moorish ancestry in the population of each province. Using an admixture approach based on binary and Y-STR haplotypes, Adams et al. (2008) were able to identify the genetic differentiation of the population of the Iberian Peninsula and the Balearic Islands, finding a relatively high mean proportion of ancestry from North Africa (10.6%). As opposed to the common expectation that a South-North gradient of North-African ancestry is followed, it is worth noting that the highest proportions of Moorish ancestry (greater than 20%) are found in Galicia and Northwest Castile, which contrast with the much lower proportions in Andalusia. It is also interesting to highlight the marked differences between the western part of Spain, with a relatively high proportion, and the eastern part where the proportion is relatively low.[115] As column 1 in Table 6 shows, the proportion of Moorish ancestry appears statistically insignificant, whereas the coefficient on the measure of political power concentration hardly changes relative to the baseline 2SLS coefficient (–0.227 vs. –0.223, both significant at 1%).

Another potential alternative mechanism that may affect current development is the population density channel capturing for instance technological progress à la Boserup or agglomeration economies. In addition, by examining the interaction between plague, war and urbanization, Voigtländer and Voth (2013) show that high death rates lead to low population growth, high land-to-labor ratios, higher wages and higher GDP per

[115] Adams et al. (2008) seek to explain these differences in the history of enforced relocation and expulsion of the Moorish population. In this regard, they point out that "the entire large community of *moriscos* in Granada was relocated northward and westward following the war of 1567-1571. In addition, the final expulsion of *moriscos*, ordered by Philip III and beginning in 1609, was highly effective in some regions, including Valencia and western Andalusia, but less so in Galicia and Extremadura, where the population was more dispersed and integrated " (pp. 732-733).

capita. Also related to the population density channel is the literature on the creation of *latifundia* and shifts from grain to cash crops cultivation in labor-scarce economies (Chaney and Hornbeck, 2013). To control for this mechanism, column 2 introduces past population density measured in 1594, which enters with a statistically insignificant coefficient and does not alter the baseline 2SLS results.

Another possible mechanism that may affect current levels of development is the degree of market fragmentation. Grafe (2012) points to the exceptionally high degree of market fragmentation observed in Spain over the seventeenth and eighteenth centuries as a main obstacle to economic development. To measure differences in the degree of market fragmentation across provinces, we construct an indicator of road density in 1760 at the province-level, with higher road density implying less fragmented markets. Column 3 introduces this variable that enters positive but statistically insignificant. Again, the 2SLS baseline results remain fairly unchanged. One could also think that historical differences in religiosity across provinces may have some effect on current development. To control for this factor, we employ the percentage of population that was member of the clergy (both secular and regular) in 1797, which is incorporated into column 4. This additional control appears positively related to current development. Again, the significance and magnitude of the coefficient on the political power concentration measure remains unaltered. This makes us confident that the Reconquest may have affected current development through the concentration of economic and political power in the hands of the landed elite.

A final mechanism left uncontrolled is that of interregional migration, which is historically hard to measure. However, there may be reasons for why people do not move between regions to arbitrage differences in economic development. One simple explanation may be found in Gennaioli et al. (2013), who develop a model in which there are frictions related to the limited supply of land and housing that do not allow people to completely arbitrage away differences in income. Besides, in our case migration would act against our identification strategy since if income differences were swept out because of interregional migration, we would no longer find an effect on current income differences, which would have vanished over time.

As shown in Panel C of Table 6, the results are fairly robust to the use of both Reconquest instruments. It is also reassuring that the result of the overidentification test

appears to favor our identification strategy, as we clearly fail to reject the null hypothesis even at the 10% level. In sum, since the Reconquest does not correlate with any of the variables proxying for the alternative channels in any significant way (Panel A of Table 6) and our baseline results remain fairly robust to the addition of the alternative channels as controls –with the relevant coefficient remaining close in magnitude to the baseline effect and also significant at the 1% level–, our results strongly suggest that the Reconquest may affect current economic development through no other channel than the concentration of political power in the hands of the landed elite that created extractive institutions to exploit the landless peasantry.

TABLE 6 -ROBUSTNESS TO ALTERNATIVE CHANNELS

Alternative channels:	Historical differences in culture and human capital (Moorish ancestry)	Population density in 1594	Market fragmentation (Road density in 1760)	Religiosity (Clerical population in 1797)
	(1)	(2)	(3)	(4)
Panel A: The effect of Reconquest on alternative channels				
Reconquered area	0.173	-0.233	-0.0003	0.0001
	(0.182)	(0.139)	(0.0003)	(0.0001)
R^2	0.02	0.05	0.01	0.03
Number of observations	48	47	50	50
Panel B: The effect of political power concentration on log GDP per capita in 2005 (instrumented by reconquered area)				
Political power concentration	-0.227***	-0.237***	-0.214***	-0.226***
	(0.051)	(0.053)	(0.043)	(0.044)
Alternative channel included as additional control	-0.001	-0.002	1.343	9.784**
	(0.004)	(0.004)	(1.526)	(4.713)
Basic set of controls included	Yes	Yes	Yes	Yes
First stage statistics				
Partial R^2	0.45	0.43	0.45	0.46
F- statistic	23.42	24.44	25.88	23.61
R^2	0.67	0.68	0.67	0.67
Number of observations	48	47	50	50
Panel C: The effect of political power concentration on log GDP per capita in 2005 (instrumented by reconquered area and Reconquest year)				
Political power concentration	-0.240***	-0.250***	-0.231***	-0.230***
	(0.051)	(0.051)	(0.045)	(0.044)
Alternative channel included as additional control	-0.001	-0.002	1.2	9.795**
	(0.004)	(0.004)	(1.565)	(4.731)
Basic set of controls included	Yes	Yes	Yes	Yes
First stage statistics				
Partial R^2	0.56	0.57	0.57	0.60
F- statistic	17.95	22.34	19.80	20.68
R^2	0.74	0.76	0.74	0.75
Number of observations	48	47	50	50
Overid. test (p-value)	[0.5137]	[0.5737]	[0.3861]	[0.8137]

Notes: Dependent variables in Panel A are the alternative channels; in Panel B and C the dependent variable is log GDP per capita in 2005. The basic set of controls contains the following variables: Crown of Aragon, Madrid, Distance to the coast, Border with Portugal, Altitude (average), Soil quality and Mining output in 1860. Variables descriptions are provided in Table A1. The estimations include a constant term, which is omitted for space considerations. Robust standard errors are in parentheses. Small-sample correction for standard errors is applied. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.

4.7. TIMING OF THE EFFECT OF THE RECONQUEST

In line with the AJR hypothesis, the central argument this chapter tries to convey is that pervasive forms of concentration of economic and political power and the resulting persistent political inequality act as severe impediments to the requirements for modern economic growth. As argued above, the concentration of *de facto* political power in the form of land (that was a major factor of production before the industrialization period) and the concentration of *de jure* political power in the form of jurisdictional rights in the hands of the nobility favored the establishment of extractive institutions to exploit the

peasantry. In addition, higher land concentration itself excluded a large part of the agrarian population from having access to land. Under these circumstances, broad segments of the population could hardly participate in economic activity. But from the point of view of the generation of wealth regardless its distribution, economic and political power concentration may not be always harmful. As argued in AJR (2002), when the main sector of activity is agriculture, the concentration of economic and political power in a few hands may not be negative for aggregate production. The plantation economic system in the Caribbean that employed slave labor is a case in point. In pre-industrial times, other factors such as soil fertility or environmental suitability may be more important for production than the presence of extractive institutions. In this sense, some of the provinces with higher economic and political power concentration are among the most fertile lands in Spain and until the beginning of industrialization were also among the wealthiest.[116]

But when the opportunity to industrialize arrives, the participation of broad segments of the population is a fundamental factor for industrialization to succeed. AJR (2002) and ES (2002) emphasize the importance of broad-based participation of the population in economic activity, paying particular attention to the role played by new entrepreneurs, innovators and middle-class citizens. Economic growth is viewed as the "cumulative impact of incremental advances made by individuals throughout the economy" (ES 2002, p. 84; Sokoloff and Khan 1990). In this regard, the adverse effect of the concentration of political power through the creation of extractive institutions showed up when industrialization came, since they "may become much more *inappropriate* with the arrival of new technologies" (AJR 2002, p. 1273).

According to this argument, the pervasive effect of the concentration of political power in the hands of the landed elite should become much more apparent during the industrialization period and afterwards than in previous times. In Table 7 we present the results of the estimation of the reduced-form effect of the Reconquest and the 2SLS

[116] For example, still in 1860, at the beginning of the industrialization period, Andalusia was the second wealthiest region, ahead of Catalonia and the Basque Country, with a level of GDP per capita about 36 percentage points above the Spanish average. But seventy years later, in 1930, Andalusia was among the poorest regions, with a level of GDP per capita of only 77 percent of the Spanish average (data from Rosés et al. 2010).

effect of the concentration of political power at different moments in time: 1500, 1800, 1860, 1930, 1971 and 2005. Since for the years 1500 and 1800 there are no data on GDP per capita, we use instead urban population density, though keeping in mind that this variable may not accurately measure the level of economic development at the subnational level for the case of Spain. This is because there are many densely populated *agro-towns* that were created after the Reconquest. They are distributed across the southern part of Spain and accumulate a large number of landless peasants, but exhibit very few features consistent with high levels of economic development (Reher 1990).

According to the above discussion, we expect to find a negative effect of the Reconquest on economic development after the onset of industrialization but not before. This is exactly what we observe in columns 1 to 6. The coefficient on normalized reconquered area (Panel A) and the exogenous component of the concentration of political power (Panel B) are positive and statistically significant in 1500 and 1800 before industrialization, and in 1860 around the time when Spain entered the industrialization phase (Pascual and Sudriá 2002; Rosés 2006).[117] This contrasts with the negative and highly significant coefficient found since then. We find similar results when log GDP per capita is replaced by log industrial production per capita, which may be more closely related to industrialization (columns 7-10).

[117] That Spain began its industrialization around 1860 is well reflected in the evolution of the railway network, which increased from less than 400 kilometers in 1855 to 5,076 kilometers in 1866 (Pascual and Sudriá 2002).

TABLE 7 - THE TIMING OF THE EFFECT OF THE RECONQUEST AND POLITICAL POWER CONCENTRATION: CROSS-SECTION RESULTS

Dependent variable:	*Urban population density in:*		*Log GDP per capita in:*				*Log industrial output per capita in:*			
	1500	*1800*	*1860*	*1930*	*1971*	*2005*	*1860*	*1930*	*1970*	*2005*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Reduced-form effect										
Reconquered area	0.117**	0.361**	0.011*	-0.016**	-0.024***	-0.021***	0.034***	-0.04***	-0.057***	-0.043***
	(0.051)	(0.135)	(0.006)	(0.007)	(0.004)	(0.003)	(0.009)	(0.012)	(0.011)	(0.013)
Crown of Aragon	-0.081	2.522	0.142	0.184*	0.131**	0.094**	0.248	0.199	0.197	0.202
	(0.676)	(2.2)	(0.098)	(0.097)	(0.053)	(0.041)	(0.198)	(0.167)	(0.142)	(0.195)
Madrid	0.579	22.928***	0.593***	0.919***	0.647***	0.434***	0.704***	0.961***	0.444**	-0.097
	(0.649)	(1.59)	(0.112)	(0.13)	(0.073)	(0.055)	(0.164)	(0.271)	(0.169)	(0.164)
Distance to the coast	0.308	-0.942	0.033	-0.002	-0.019	-0.035	0.088	-0.027	0.061	0.086
	(0.437)	(0.823)	(0.062)	(0.066)	(0.036)	(0.031)	(0.083)	(0.151)	(0.098)	(0.114)
Border with Portugal	-1.705**	-5.603**	-0.152	-0.109	-0.038	-0.014	-0.339*	-0.254	0.004	-0.147
	(0.727)	(2.508)	(0.141)	(0.09)	(0.067)	(0.047)	(0.176)	(0.207)	(0.196)	(0.221)
Altitude (average)	-0.001	-0.009***	0.000	-0.001***	-0.0004***	0.000	-0.0005**	-0.001***	-0.001***	0.000
	(0.001)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Soil quality	-0.161	1.918	0.781**	0.373**	0.43***	0.327***	0.551	0.955**	0.697**	0.192
	(1.408)	(2.811)	(0.334)	(0.168)	(0.116)	(0.082)	(0.405)	(0.415)	(0.341)	(0.34)
Mining output in 1860	-0.05	-0.189	0.003	0.009	0.004	0.005*	0.021	0.017	0.029**	0.029**
	(0.058)	(0.162)	(0.008)	(0.006)	(0.003)	(0.003)	(0.013)	(0.011)	(0.011)	(0.012)
R^2	0.17	0.58	0.48	0.62	0.71	0.66	0.46	0.6	0.56	0.32
Number of observations	50	50	50	50	50	50	50	50	50	50
Panel B: 2SLS results										
Political power	1.261**	3.904***	0.114*	-0.177**	-0.262***	-0.223***	0.373***	-0.432***	-0.618***	-0.468***
concentration	(0.494)	(1.346)	(0.066)	(0.067)	(0.064)	(0.046)	(0.093)	(0.131)	(0.155)	(0.14)
Crown of Aragon	-0.556	1.054	0.099	0.251**	0.23***	0.177***	0.108	0.361*	0.429**	0.378**
	(0.57)	(2.265)	(0.099)	(0.099)	(0.064)	(0.049)	(0.181)	(0.179)	(0.163)	(0.175)
Madrid	-0.336	20.097***	0.511***	1.047***	0.837***	0.596***	0.434**	1.274***	0.892***	0.242
	(0.788)	(1.536)	(0.13)	(0.116)	(0.081)	(0.05)	(0.194)	(0.235)	(0.194)	(0.18)
Distance to the coast	0.042	-1.765*	0.009	0.035	0.036	0.012	0.009	0.064	0.192*	0.185*
	(0.435)	(0.962)	(0.064)	(0.065)	(0.038)	(0.029)	(0.095)	(0.136)	(0.096)	(0.104)
Border with Portugal	-1.452**	-4.82**	-0.129	-0.145	-0.09	-0.059	-0.264*	-0.34	-0.12	-0.241
	(0.692)	(2.255)	(0.129)	(0.106)	(0.103)	(0.067)	(0.151)	(0.25)	(0.277)	(0.248)
Altitude (average)	-0.002	-0.011***	0.000	-0.0005**	-0.0003**	0.000	-0.001***	-0.001***	-0.001**	0.000
	(0.001)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Soil quality	-1.287	-1.568	0.679*	0.531***	0.664***	0.526***	0.218	1.341***	1.249***	0.61
	(1.695)	(3.457)	(0.363)	(0.181)	(0.172)	(0.122)	(0.478)	(0.43)	(0.424)	(0.387)
Mining output in 1860	-0.025	-0.112	0.005	0.005	-0.001	0.001	0.028**	0.008	0.017	0.02
	(0.063)	(0.142)	(0.008)	(0.006)	(0.004)	(0.003)	(0.013)	(0.011)	(0.012)	(0.013)
First stage statistics: Partial R^2=0.46; F-statistic=24.54; R^2=0.67; Number of observations=50.										

Notes: Variables descriptions are provided in Table A1. GDP and industrial output variables are all expressed in pesetas. The estimations include a constant term, which is omitted for space considerations. Robust standard errors are in parentheses. Small-sample correction for standard errors is applied in 2SLS regressions. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.

Since the exact timing of industrialization in Spain may be endogenous, we complement the previous analysis with some panel regressions that use industrialization in the United Kingdom and the United States, following the insights from AJR (2002, pp. 1274-1275). More specifically, we take Mitchell (2007a, b)'s estimates of U.K. industrial output as a measure of the opportunity to industrialize, since during the nineteenth century the U.K. was the world industrial leader. For robustness purposes, we also employ U.S. industrial output as an alternative proxy for the opportunity to industrialize. The panel data specification for reduced-form estimation is as follows:

$$y_{it} = \alpha_i + \theta_t + \phi \cdot \text{Re}conquest_i \times Industrialization_t + \upsilon_{it} \quad (5)$$

where y_{it} is either provincial GDP per capita or industrial output per capita expressed in relative terms with respect to the national average at date *t* (1860, 1930, 1971 and 2005). α_i is a set of province-level dummies and θ_t stands for a set of time dummies. $Reconquest_i$ represents our preferred measure of the Reconquest (i.e., reconquered area) in province *i* and $Industrialization_t$ denotes either U.K. industrial output or U.S. industrial output at date *t*. For the sake of completeness, we also run 2SLS panel data regressions of the following form:

$$y_{it} = \alpha_i + \theta_t + \phi \cdot political\ \ power\ concentration_i \times Industrialization_t + \upsilon_{it} \quad (6)$$

where $political\ power\ concentration_i$ stands for our composite indicator of *de facto* and *de jure* political power, and all the other variables are defined as in specification (5). In similar spirit to AJR (2002), we employ the interaction between reconquered area and industrialization to instrument for the interaction between political power concentration and industrialization. To the extent that the Reconquest is a good instrument for the concentration of political power, our interaction instrument should be valid. In both specifications, the coefficient of interest is ϕ, which should be negative and statistically significant. This is because the pervasive effect of the concentration of political power conducive to extractive institutions should become more apparent when the opportunity to industrialize arrives, as reflected in the negative interaction between either the Reconquest or the exogenous component of political power concentration and industrialization.

Columns 1-2 and 5-6 of Table 8 present the reduced-form panel regressions for the cases in which the dependent variable is relative GDP per capita and relative industrial output per capita, respectively. It is worth highlighting that the interaction term ϕ appears negative and statistically significant at the 1% level in all cases. Similar results are obtained in the 2SLS panel regressions that are presented in columns 3-4 for the case of relative GDP per capita and columns 7-8 for the case of relative industrial output per capita. It is also worth noting that the first-stage statistics support the use of the interaction between reconquered area and industrialization as an instrument for the interaction between political power concentration and industrialization. The magnitude

of the coefficient of interest is found to be substantially larger (in absolute terms) in the specifications that use industrial output per capita as the dependent variable. This can be explained to the extent that industrial output is more closely related to industrialization than GDP. In sum, these results provide evidence consistent with the AJR hypothesis suggesting that persistent political inequality is a severe impediment to the requirements for modern economic growth, which is based on entrepreneurship, innovation and the participation of broad segments of the population in economic activity.

TABLE 8 - THE TIMING OF THE EFFECT OF THE RECONQUEST AND POLITICAL POWER CONCENTRATION: PANEL RESULTS

	Dependent variable is relative GDP per capita (average=100)				*Dependent variable is relative industrial output per capita (average=100)*			
	Reduced-form results		2SLS results		Reduced-form results		2SLS results	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Reconquered area * UK industrial output	-0.011***				-0.026***			
	(0.003)				(0.005)			
Reconquered area * US industrial output		-0.002***				-0.004***		
		(0.000)				(0.001)		
Political power concentration * UK industrial output			-0.119***				-0.286***	
			(0.025)				(0.056)	
Political power concentration * US industrial output				-0.018***				-0.042***
				(0.005)				(0.011)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
			First stage statistics				*First stage statistics*	
Partial R^2			0.40	0.40			0.40	0.40
F- statistic			63.74	52.42			63.74	52.42
R^2	0.65	0.63	0.84	0.73	0.66	0.63	0.84	0.73
Number of observations	200	200	200	200	200	200	200	200

Notes: Variables descriptions are provided in Table A1. The dependent variables GDP and industrial output *per capita* are expressed in relative terms with respect to the national average in each period. The panel consists of four data points: 1860, 1930, 1971 and 2005. The estimations include a constant term, which is omitted for space considerations. The instruments are "Reconquered area * UK Industrial output" in columns 3 and 7 and "Reconquered area * US Industrial output" in columns 4 and 8. Robust standard errors are in parentheses. Small-sample correction for standard errors is applied in 2SLS regressions. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.

4.8. CONCLUSIONS

This chapter holds the view that the pattern of concentration of economic and political power resulting from the Reconquest in the Middle Ages is a major factor in shaping the regional income distribution of Spain. We use the timing and conditions surrounding the Reconquest of each province by the Christian kingdoms as an instrument for the

concentration of *de facto* and *de jure* political power. The 2SLS results indicate that the unequal distribution of economic and political power in society is able to explain a large part of the income differences existing among the Spanish provinces. Therefore, these income differences reflect a historical fact: the political inequality that regions with a high concentration of economic and political power in the hands of the landowning elite have suffered throughout several centuries. This created the conditions that led to the exclusion of large segments of the population from participating in the economic opportunities opened up with the arrival of industrialization. The result was that provinces featuring an unequal distribution of economic resources and political power fell behind during the process of industrialization.

Our results are robust to controlling for historical controls and a wide array of climatic, geographic and natural resources endowments that account for simple and sophisticated versions of the geography hypothesis. It is of particular interest the lack of a significant effect from differences in land suitability for plantation crops featuring economies of scale in production. The results are also robust to controlling for the biogeographic conditions in the Neolithic and the transition to early agriculture, historical differences in culture and levels of human capital measured by the proportion of Moorish ancestry in the population of each province, the population density channel, the degree of market fragmentation or historical differences in religiosity across provinces. Instead, the evidence consistently points to differences in the concentration of economic and political power in the hands of a small landed elite emanating from the timing and conditions associated with the different stages of the Reconquest, which in turn exert a long-term influence on economic development.

A question that deserves further research is why the effect of the concentration of economic and political power rooted in the distant past is so persistent even though today some sources of this problem are no longer present. Perhaps, early obstruction to industrialization has long-lasting consequences. Historical political inequality may have affected the initial paths of industrialization and development and, once launched, different economic forces (e.g., increasing returns) reproduce the initial divergence. Also, many social and cultural patterns developed in the past due to structural economic and political inequality that precluded large segments of the population from participating in economic activity can persist today.

Finally, our analysis of the Spanish Reconquest and the process of colonization of Muslim lands is appealing from the point of view of the literature on colonialism. It gives clues about the subsequent colonization of the New World. When the Spaniards faced the colonization of Central and South America in the sixteenth century, they had the long experience gained in the Reconquest. The policy of distribution of economic power in the form of large estates as well as of political power in the form of feudal rights that was employed in Spain since the mid-eleventh century (and became widespread since the thirteenth century) is an advance of what would later be implemented in the New World. The Spanish case also shows how persistent inequality in the distribution of economic and political power can become and the institutions and mechanisms behind this persistence, such as entailed estates protected by law or land concentration in ecclesiastical mortmain.

4.9. APPENDIX

TABLE A1 - DESCRIPTION OF VARIABLES

Variable	Description	Source
Dependent variables		
Log GDP *per capita*	Lof of GDP *per capita* in 1860, 1930, 1971 and 2005.	Rosés et al (2010) for 1860 and 1930; Carreras et al. (2005) for 1971; Spanish Regional Accounts. Base 2000 (INE) for 2005.
Log industrial output *per capita*	Log of industrial output *per capita* in 1860, 1930, 1970 and 2005.	Rosés et al. (2010) for 1860; Carreras (2005) for 1930 and 1970; Spanish Regional Accounts. Base 2000 (INE) for 2005.
Urban population density	Density of urban population (inhabitants in cities greater than or equal to 5000 inhabitants over provincial surface area in km^2) in 1500 and 1800.	Bairoch (1988).
Reconquest indicators		
Normalized reconquered area	This variable is created (using ArcGIS) as follows. We overlap the Reconquest map from Mestre-Campi and Sabaté (1998) with a geo-referenced map of the Spanish provinces. We also overlap a map of the initial resistance area (http://explorethemed.com/Reconquista.asp) with the map of Spanish provinces. We then draw the lines of each stage of the Reconquest as well as a line separating Castile and Aragon. We calculate the surface area corresponding to each stage of the Reconquest for Castile and Aragon. Since each stage of the Reconquest had a different duration, to make "reconquered areas" comparable, we normalize the reconquered area in each stage by dividing it by the duration in years that each stage lasted for. This duration is calculated as the difference between the dates associated with each of the subsequent lines of frontier depicted in the map of the Reconquest in Figure 2. Since the area of a province can partially cover more than one stage of the Reconquest, we calculate its area within each of the respective stages. We then compute the weighted average of the normalized reconquered area of each province, where the weights are given by the percentage of the province area conquered in each stage. The variable is expressed in 100 km^2/year.	Authors' elaboration using information from Mestre-Campi and Sabaté (1998).
Reconquest year	The year when the capital city of the province was conquered by the Christians. If this year is unknown or the city did not exist at that time, it is assigned the year when the Muslims-Christian frontier surpasses the current location of the capital city. To those provinces whose territories were largely not occupied by the Muslims, we assign the year 711. The variable is expressed in hundreds of years.	Authors' elaboration using information from Mestre-Campi and Sabaté (1998) and Guichard (2002), among others.
Endogenous variables		
Political power concentration	Composite indicator of political power concentration calculated as the average of the following two standardized variables: "Percentage of landless workers in 1797" and "Percentage of villages under seigneurial jurisdiction in 1797". We standardize the variables by subtracting the average and then dividing by the standard deviation.	Authors' elaboration using data from Morales (1998) and 1797 population census (INE, 1992).
Percentage of landless workers in 1797	Percentage of landless workers over the agricultural active population in 1797. We impute data from historical regions to current provinces by estimating (with ArcGIS) the percentage of area in each province that corresponds to each historical region.	Authors' elaboration using data from Morales (1998) and 1797 population census (INE, 1992).
Percentage of villages and cities under seigneurial jurisdiction in 1797	Variable measuring the percentage of villages and cities ("villas" and "ciudades") under either noble or military order jurisdiction in 1797. We impute data from historical regions to current provinces by estimating (with ArcGIS) the percentage of area in each province that corresponds to each historical region.	Authors' elaboration using data from Morales (1998) and 1797 population census (INE, 1992).

TABLE A1 - DESCRIPTION OF VARIABLES (Continued)

Variable	Description	Source
Controls		
Altitude: average and coefficient of variation	Average altitude of the province (simple average of the municipalities of the province). Coefficient of variation of the altitude of the municipalities of the province.	Geographic Nomenclature of Municipalities and Local Population (Instituto Geográfico Nacional -IGN- 2012).
Arable land (%)	Percentage of arable land over total surface area.	1962 agricultural census (INE) (www.ine.es).
Border with Portugal	Dummy variable indicating whether the province is in the border with Portugal.	Authors' elaboration.
Coal dummy in 1860	Dummy variable indicating whether the province had some coal mine in 1860.	1860-1861 Statistical Yearbook of Spain (Junta General de Estadística -JGE- 1863).
Coal output in 1860	Logarithm of the value created by the coal mining in 1860.	1860-1861 Statistical Yearbook of Spain (JGE 1863).
Coast dummy	Dummy variable indicating whether the province has coast.	Authors' elaboration.
Coast length/ surface area	Length of coast over surface area.	Physical variables. Territory (INE) (www.ine.es).
Crown of Aragon	Dummy variable capturing whether the province belonged to the Crown of Aragon.	Authors' elaboration.
Distance from London and from Paris	Linear distance between the centroid of the province and London or Paris (in 100 km), using ArcGIS.	Authors' elaboration.
Distance from Madrid	Linear distance between the centroid of the province and Madrid (in 100 km), using ArcGIS.	Authors' elaboration.
Distance to the coast	Linear distance between the centroid of the province and the nearest point of the coast (in 100 km), using ArcGIS. For the three provinces that are islands, this variable takes the value of 0.	Authors' elaboration.
Humidity, Temperature and Rainfall	Annual average temperature, rainfall and relative humidity.	Standard Climate Values (Agencia Estatal de Meteorología 2012).
Island	Dummy variable indicating whether the province is an island.	Authors' elaboration.
Latitude	Latitude of the centroid of the province, using ArcGIS.	Authors' elaboration.
Land suitability for cotton	Provincial average of the crop suitability index for low input level rain-fed cotton.	Authors' elaboration using data from FAO/IIASA (2010).
Land suitability for sugar	Provincial average of the crop suitability index for low input level rain-fed sugarcane.	Authors' elaboration using data from FAO/IIASA (2010).
Land suitability for tobacco	Provincial average of the crop suitability index for low input level rain-fed tobacco.	Authors' elaboration using data from FAO/IIASA (2010).
Madrid	Dummy variable indicating the capital city of Spain.	Authors' elaboration.
Mediterranean Sea, Atlantic Ocean, Cantabrian Sea	Dummy variables indicating whether the province has access to the Mediterranean Sea, the Atlantic Ocean or the Cantabrian Sea.	Authors' elaboration.
Mining output in 1860	Logarithm of the value created by the mining industry in 1860.	1860-1861 Statistical Yearbook of Spain (JGE 1863).
Soil quality	Average of seven key soil dimensions important for crop production: nutrient availability, nutrient retention capacity, rooting conditions, oxygen availability to roots, excess salts, toxicities, and workability. For each component, we calculate the provincial average value.	Authors' elaboration using data from Fischer et al. (2008).
Wooded steppe (% area)	Percentage of province area that was subject to wooded steppe 10,000 years ago.	Authors' elaboration using ArcGIS and data from Olsson and Paik (2013).
Years since transition to agriculture	This variable is constructed for each province using the following equation: $Y(S_0)=\Sigma\ \lambda_i\ Y(S_i)$, where $Y(S_0)$ is the predicted date of adoption of agriculture for the centroid of each respective province (denoted by S_0). Σ means a sum from site 1 to N, where N is the number of measured sample points surrounding S_0. We restrict the measured sample points to those located in the Iberian Peninsula that make a total of 13 Neolithic sites. $Y(S_i)$ is the observed value of the predicted date of early adoption of agriculture in Neolithic site S_i. λ_i are weights calculated as $\lambda_i= (D/d_i)/\Sigma(D/d_i)$, where $\Sigma\ \lambda_i = 1$ and d_i is the distance between S_0 and each Neolithic site S_i. $D = \Sigma d_i$ is the total sum of the 13 d_i for the centroid of each respective province (S_0). Note that (D/d_i) implies that we assign greater weights to those sites located closer to the centroid of each province.	Authors' elaboration using ArcGIS and data from Pinhasi, Fort and Ammerman (2005).

TABLE A1 - DESCRIPTION OF VARIABLES (Continued)

Variable	Description	Source
Other variables		
Clerical population (%)	Percentage of population that is member of the clergy (both secular and regular) in 1797. We impute data from historical regions to current provinces by estimating (with ArcGIS) the percentage of area in each province that corresponds to each historical region.	Authors' elaboration using data from Morales (1998) and 1797 population census (INE, 1992).
Coinage of imperial Roman coins over surface area	Number of points of coinage of imperial Roman coins over provincial surface area (in 1,000 km^2).	Authors' elaboration using data from García de Cortázar (2007).
Density of urban population in 800	Density of urban population (inhabitants in cities greater than or equal to 5000 inhabitants over provincial surface area in km^2) in 800.	Bairoch (1988).
Moorish ancestry	Proportion of Moorish ancestry in the population of each province.	Adams et al. (2008).
Number of bishoprics over surface area	Number of bishoprics circa 600 over provincial surface area (in 1,000 km^2).	Authors' elaboration using data from Digital Atlas of Roman and Medieval Civilizations.
Population density in 1594	Number of inhabitants per square kilometer in 1594. We impute data from historical regions to current provinces by estimating (with ArcGIS) the percentage of area in each province that corresponds to each historical region.	Authors' elaboration using data from 1858 Statistical Yearbook of Spain (JGE 1860) and INE (1982).
Road density in 1760	Kilometers of roads in 1760 ("caminos de ruedas") over provincial surface area (in square kilometers).	Authors' elaboration using ArcGIS and data from IGN (2008).
Roman roads density	Length of Roman roads (in meters) over provincial surface area (in km^2).	Authors' elaboration using ArcGIS and data from García de Cortázar (2007).
Total UK industrial output	Total industrial output of the United Kingdom in 1860, 1930, 1971 and 2005. Base year is 1913.	Mitchell (2007a) and IMF (2013).
Total US industrial output	Total industrial output of the United States in 1860, 1930, 1971 and 2005. Base year is 1899.	Mitchell (2007b) and IMF (2013).
City population in 800	Inhabitants (in thousands) in cities greater than or equal to 5000 inhabitants in 800.	Bairoch (1988).
Variables at the municipal level		
Altitude	Altitude corresponding to the municipality centroid.	Geographic Nomenclature of Municipalities and Local Population (IGN 2012).
Annual average temperature	Annual average temperature corresponding to the municipality centroid (in centigrade degrees multiplied by 10).	Authors' elaboration using ArcGIS and data from WorldClim (Hijmans et al., 2005).
Annual rainfall	Annual precipitation corresponding to the municipality centroid (in millimeters).	Authors' elaboration using ArcGIS and data from WorldClim (Hijmans et al., 2005).
Average number of vehicles per household	Number of vehicles (cars and vans) for personal transport owned by households, divided by the number of households. The year of measurement is 2001.	INE. Censos de Población y Viviendas 2001 (www.ine.es).
Average socioeconomic condition	Average of class marks of socioeconomic conditions of individuals (multiplied by 100). Socioeconomic condition is obtained by combining information from the variables occupation, activity and professional situation. To illustrate the construction of this variable, a (maximum) class mark equal to 3 is given to non-agricultural entrepreneurs with employees, and a (minimun) class mark of 0 to those unemployed who have not worked previously. The year of measurement is 2001.	INE. Censos de Población y Viviendas 2001 (www.ine.es).
Distance to Madrid	Linear distance between the centroid of the municipality and Madrid (in km), using ArcGIS.	Authors' elaboration.
Distance to the coast	Linear distance between the centroid of the municipality and the nearest point of the coast (in km), using ArcGIS.	Authors' elaboration.
Distance to the nearest capital	Linear distance between the centroid of the municipality and the nearest provincial capital (in km), using ArcGIS.	Authors' elaboration.
Excess salts	This variable assesses the following soil characteristics: "*Soil salinity, soil sodicity and soil phases influencing salt conditions*". We calculate the average value of the municipality.	Authors' elaboration using ArcGIS and data from Fischer et al. (2008).

TABLE A1 - DESCRIPTION OF VARIABLES (Continued)

Variable	Description	Source
Labor force activity rate	Labor force activity rate of the population between 20 and 59 years old. The year of measurement is 2001.	INE. Censos de Población y Viviendas 2001 (www.ine.es).
Latitude	Latitude of the municipality centroid.	Geographic Nomenclature of Municipalities and Local Population (IGN 2012).
Nutrient availability	This variable assesses the following soil characteristics: "*Soil texture, soil organic carbon, soil pH, total exchangeable bases*". We calculate the average value of the municipality.	Authors' elaboration using ArcGIS and data from Fischer et al. (2008).
Nutrient retention capacity	This variable assesses the following soil characteristics: "*Soil organic carbon, soil texture, base saturation, cation exchange capacity of soil and of clay fraction*". We calculate the average value of the municipality.	Authors' elaboration using ArcGIS and data from Fischer et al. (2008).
Oxygen availability to roots	This variable assesses the following soil characteristics: "*Soil drainage and soil phases affecting soil drainage*". We calculate the average value of the municipality.	Authors' elaboration using ArcGIS and data from Fischer et al. (2008).
Population	Log of total population in 2001.	INE. Censos de Población y Viviendas 2001 (www.ine.es).
Provincial capital dummy	Dummy variable indicating whether the municipality is a provincial capital city.	Authors' elaboration.
Reconquered area	This variable is created in a similar way to the provincial level variable. In this case, we assing to each municipality the reconquered area corresponding to the stage of the Reconquest to which the municipality centroid belongs.	Authors' elaboration using ArcGIS and information from Mestre-Campi and Sabaté (1998).
Rooting conditions	This variable assesses the following soil characteristics: "*Soil textures, bulk density, coarse fragments, vertic soil properties and soil phases affecting root penetration and soil depth and soil volume*". We calculate the average value of the municipality.	Authors' elaboration using ArcGIS and data from Fischer et al. (2008).
Toxicity	This variable assesses the following soil characteristics: "*Calcium carbonate and gypsum*". We calculate the average value of the municipality.	Authors' elaboration using ArcGIS and data from Fischer et al. (2008).
Workability	This variable assesses the following soil characteristics: "*Soil texture, effective soil depth/volume, and soil phases constraining soil management (soil depth, rock outcrop, stoniness, gravel/concretions and hardpans)*". We calculate the average value of the municipality.	Authors' elaboration using ArcGIS and data from Fischer et al. (2008).

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INDEX:

TABLE A2 - DESCRIPTIVE STATISTICS

Variable	Obs	Mean	Std. Dev.	Min	Max
Dependent variables					
Log GDP per capita 1860 (ptas)	50	5.82	0.36	4.38	6.53
Log GDP per capita 1930 (ptas)	50	7.09	0.33	6.54	7.99
Log GDP per capita 1971 (ptas)	50	13.21	0.27	12.75	13.70
Log GDP per capita 2005 (€)	50	9.87	0.20	9.51	10.28
Log industrial output per capita 1860 (ptas)	50	4.06	0.55	2.73	5.44
Log industrial output per capita 1930 (ptas)	50	5.45	0.70	4.26	7.01
Log industrial output per capita 1970 (ptas)	50	9.77	0.59	8.67	11.07
Log industrial output per capita 2005 (€)	50	7.96	0.58	6.68	9.16
Urban population density in 1500	50	1.75	2.03	0.00	8.26
Urban population density in 1800	50	6.34	6.76	0.55	29.59
Reconquest indicators					
Normalized reconquered area	50	7.08	5.94	0.00	22.53
Reconquest year (in hundreds of years)	50	10.73	2.35	7.11	14.96
Endogenous variables					
Political power concentration	50	0.00	0.86	-2.25	1.19
Percentage of landless workers in 1797	50	48.12	21.87	3.10	86.01
Percentage of villages and cities under seigneurial jurisdiction in 1797	50	53.56	20.30	0.00	84.88

TABLE A2 - DESCRIPTIVE STATISTICS (Continued)

Variable	Obs	Mean	Std. Dev.	Min	Max
Controls					
Altitude (average)	50	534.90	276.04	111.01	1044.14
Altitude (coeff. of variation)	50	0.52	0.34	0.06	1.36
Arable land (%)	50	0.40	0.17	0.04	0.80
Border with Portugal	50	0.14	0.35	0.00	1.00
Coal dummy in 1860	50	0.18	0.39	0.00	1.00
Log coal output in 1860	50	1.90	4.18	0.00	14.84
Coast dummy	50	0.44	0.50	0.00	1.00
Coast length/ surface area	50	0.03	0.06	0.00	0.29
Crown of Aragon	50	0.22	0.42	0.00	1.00
Distance from London	50	13.20	3.90	9.41	29.57
Distance from Madrid	50	3.57	3.15	0.00	18.34
Distance from Paris	50	11.13	4.04	7.26	28.37
Distance to the coast	50	1.10	0.94	0.00	3.30
Humidity	50	66.84	5.29	57.00	78.00
Rainfall	50	575.28	320.77	134.00	1691.00
Temperature	50	14.64	2.82	10.10	21.20
Island	50	0.06	0.24	0.00	1.00
Laitude	50	40.12	3.17	27.95	43.29
Land suitability for cotton	50	668.20	761.35	0.00	2379.11
Land suitability for sugar	50	2.24	7.46	0.00	34.53
Land suitability for tobacco	50	1327.79	528.66	171.52	2681.86
Madrid	50	0.02	0.14	0.00	1.00
Atlantic Ocean	50	0.12	0.33	0.00	1.00
Cantabrian Sea	50	0.10	0.30	0.00	1.00
Mediterranean Sea	50	0.22	0.42	0.00	1.00
Log mining output in 1860	50	10.32	6.04	0.00	17.90
Soil quality	50	-1.54	0.22	-2.13	-1.04
Wooded steppe (% area)	50	0.38	0.46	0.00	1.00
Years since transition to agriculture	50	7445	34	7339	7530

TABLE A2 - DESCRIPTIVE STATISTICS (Continued)

Variable	Obs	Mean	Std. Dev.	Min	Max
Other variables					
Clerical population (%)	50	0.02	0.00	0.01	0.03
Coinage of imperial Roman coins over surface area	50	0.06	0.09	0.00	0.40
Density of urban population in 800	50	0.47	1.72	0.00	11.62
Moorish ancestry	48	8.76	8.01	0.00	21.70
Number of bishoprics over surface area	50	0.11	0.11	0.00	0.39
Population density in 1594	47	17.98	6.67	7.34	36.24
Road density in 1760	50	0.02	0.01	0.00	0.06
Roman roads density	50	27.04	14.06	0.00	56.45
Urban population in 800	50	6.50	23.84	0.00	160.00
Variables at the municipal level					
Altitude	8117	613.46	344.00	0.00	1695.00
Annual average temperature	8197	127.51	24.80	24.00	196.00
Annual rainfall	8197	604.79	225.89	113.00	1522.00
Average number of vehicles per household	8108	0.96	0.28	0.00	2.51
Average socioeconomic condition	8108	95.12	14.99	31.00	186.00
Distance to Madrid	8195	290.99	202.62	0.00	1950.28
Distance to the coast	8195	131.93	98.90	0.03	370.87
Distance to the nearest capital	8195	44.14	24.42	0.00	230.53
Excess salts	8137	-1.13	0.41	-5.95	-1.00
Labor force activity rate	8108	74.37	7.10	27.27	100.00
Latitude	8117	40.73	2.12	27.70	43.74
Nutrient availability	8137	-1.26	0.44	-6.14	-1.00
Nutrient retention capacity	8137	-1.17	0.36	-6.08	-1.00
Oxygen availability to roots	8137	-1.03	0.19	-5.95	-1.00
Log of population	8108	6.55	1.75	1.95	14.89
Provincial capital dummy	8195	0.01	0.08	0.00	1.00
Reconquered area	8191	5.90	5.32	0.00	22.66
Rooting conditions	8137	-2.48	1.01	-6.26	-1.00
Toxicity	8137	-1.12	0.30	-5.95	-1.00
Workability	8137	-2.40	0.77	-6.24	-1.00

TABLE A3 -2SLS RESULTS WITH AN ALTERNATIVE INDICATOR OF POLITICAL POWER CONCENTRATION

Dependent variable is log GDP per capita in 2005

	OLS results	*Baseline 2SLS results*	*Using an alternative instrument: Reconquest year*	*Using two instruments: Overidentification test*
	(1)	(2)	(3)	(4)
Panel A: Second stage results				
Political power concentration	-0.105***	-0.167***	-0.186***	-0.178***
	(0.019)	(0.038)	(0.042)	(0.037)
Crown of Aragon	0.155***	0.151***	0.15**	0.15**
	(0.045)	(0.054)	(0.059)	(0.057)
Madrid	0.572***	0.64***	0.661***	0.652***
	(0.049)	(0.064)	(0.068)	(0.064)
Distance to the coast	-0.024	-0.004	0.003	0
	(0.025)	(0.03)	(0.033)	(0.031)
Border with Portugal	-0.076	-0.055	-0.048	-0.051
	(0.056)	(0.073)	(0.082)	(0.078)
Altitude (average)	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Soil quality	0.37***	0.531***	0.581***	0.56***
	(0.086)	(0.13)	(0.151)	(0.137)
Mining output in 1860	0.001	0.000	0.000	0.000
	(0.003)	(0.003)	(0.004)	(0.004)
Panel B: First stage results				
Reconquered area		0.123***		0.067**
		(0.029)		(0.029)
Reconquest year			0.338***	0.225***
			(0.066)	(0.066)
Crown of Aragon		0.342	-0.132	0.11
		(0.29)	(0.304)	(0.304)
Madrid		1.228***	0.749***	0.937***
		(0.265)	(0.239)	(0.223)
Distance to the coast		0.187	0.438***	0.325**
		(0.169)	(0.137)	(0.141)
Border with Portugal		-0.244	0.047	-0.171
		(0.316)	(0.353)	(0.323)
Altitude (average)		0.001	-0.001	0
		(0.001)	(0.001)	(0.001)
Soil quality		1.216**	0.584	0.513
		(0.562)	(0.635)	(0.551)
Mining output in 1860		-0.031*	0.004	-0.01
		(0.016)	(0.017)	(0.015)
Partial R^2		0.43	0.48	0.55
F- statistic		18.18	25.91	16.27
R^2	0.64	0.63	0.66	0.71
Number of observations	50	50	50	50
Overid. test (p-value)				[0.4870]

Notes: Political power concentration is estimated as the first principal component of the variables: percentage of landless workers in 1797, percentage of villages under noble jurisdiction in 1797 and percentage of villages under military order jurisdiction in 1797. The first principal component is given by $PC_i = 0.7486*landless\_workers_i + 0.6454*noble\_jur_i + 0.1521*mil\_orders\_jur_i$, which explains 45.1 % of the variables variance. Variables descriptions are provided in Table A1. The estimations include a constant term, which is omitted for space considerations. Robust standard errors are in parentheses. Small-sample correction for standard errors is applied in 2SLS regressions. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.

TABLE A4 -ROBUSTNESS TO ALTERNATIVE CHANNELS, WITH AN ALTERNATIVE INDICATOR OF POLITICAL POWER CONCENTRATION

Dependent variable is log GDP per capita in 2005

	The instrument is reconquered area				The instruments are reconquered area and Reconquest year			
	Historical differences in culture and human capital	Population density	Market fragmentation	Religiosity	Historical differences in culture and human capital	Population density	Market fragmentation	Religiosity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Second stage results								
Political power concentration	-0.172***	-0.175***	-0.163***	-0.171***	-0.179***	-0.183***	-0.174***	-0.165***
	(0.042)	(0.043)	(0.037)	(0.034)	(0.04)	(0.039)	(0.037)	(0.031)
Crown of Aragon	0.132**	0.126*	0.15***	0.124**	0.131**	0.123*	0.149**	0.125**
	(0.062)	(0.066)	(0.055)	(0.055)	(0.064)	(0.067)	(0.057)	(0.054)
Madrid	0.674***	0.689***	0.621***	0.573***	0.683***	0.702***	0.635***	0.567***
	(0.083)	(0.099)	(0.064)	(0.068)	(0.081)	(0.095)	(0.065)	(0.065)
Distance to the coast	-0.016	-0.015	-0.009	-0.028	-0.013	-0.013	-0.005	-0.029
	(0.034)	(0.035)	(0.032)	(0.03)	(0.034)	(0.035)	(0.033)	(0.029)
Border with Portugal	-0.05	-0.049	-0.048	-0.08	-0.051	-0.046	-0.045	-0.082
	(0.08)	(0.076)	(0.073)	(0.069)	(0.083)	(0.079)	(0.077)	(0.068)
Altitude (average)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Soil quality	0.597***	0.603***	0.503***	0.427***	0.619***	0.621***	0.534***	0.413***
	(0.186)	(0.167)	(0.122)	(0.128)	(0.186)	(0.164)	(0.131)	(0.118)
Mining output in 1860	-0.002	-0.002	0.000	-0.002	-0.002	-0.003	0.000	-0.001
	(0.004)	(0.004)	(0.004)	(0.003)	(0.004)	(0.004)	(0.004)	(0.003)
Moorish ancestry	0.000				0.000			
	(0.004)				(0.005)			
Population density in 1594		-0.001				-0.001		
		(0.004)				(0.004)		
Road density in 1760			0.956				0.807	
			(1.675)				(1.724)	
Clerical population in 1797				13.732***				13.576***
				(4.387)				(4.574)
Panel B: First stage statistics								
Partial R^2	0.41	0.40	0.41	0.43	0.53	0.54	0.53	0.61
F- statistic	17.43	20.41	18.30	18.93	15.64	18.84	16.02	21.88
R^2	0.63	0.63	0.63	0.63	0.7	0.72	0.71	0.75
Number of observations	48	47	50	50	48	47	50	50
Overid. test (p-value)					[0.6827]	[0.7081]	[0.5268]	[0.7027]

Notes: Political power concentration is estimated as the first principal component of the variables: percentage of landless workers in 1797, percentage of villages under noble jurisdiction in 1797 and percentage of villages under military order jurisdiction in 1797. The first principal component is given by $PC_i = 0.7486*landless\_workers_i + 0.6454*noble\_jur_i + 0.1521*mil\_orders\_jur_i$, which explains 45.1 % of the variables variance. Variables descriptions are provided in Table A1. The estimations include a constant term, which is omitted for space considerations. Robust standard errors are in parentheses. Small-sample correction for standard errors is applied in 2SLS regressions. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.

TABLE A5 - THE TIMING OF THE EFFECT OF POLITICAL POWER CONCENTRATION (ALTERNATIVE INDICATOR)

Dependent variable:	*Urban population density in:*		*Log GDP per capita in:*				*Log industrial output per capita in:*			
	1500	*1800*	*1860*	*1930*	*1971*	*2005*	*1860*	*1930*	*1970*	*2005*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Political power	0.947**	2.931***	0.086*	-0.133**	-0.197***	-0.167***	0.28***	-0.324***	-0.464***	-0.351***
concentration	(0.357)	(1)	(0.049)	(0.05)	(0.052)	(0.038)	(0.068)	(0.103)	(0.123)	(0.109)
Crown of Aragon	-0.405	1.52	0.113	0.23**	0.198***	0.151***	0.152	0.31*	0.355**	0.322*
	(0.588)	(2.197)	(0.097)	(0.1)	(0.071)	(0.054)	(0.179)	(0.184)	(0.167)	(0.174)
Madrid	-0.584	19.329***	0.488***	1.082***	0.889***	0.64***	0.36*	1.359***	1.014***	0.334*
	(0.817)	(1.603)	(0.135)	(0.122)	(0.098)	(0.064)	(0.202)	(0.247)	(0.217)	(0.197)
Distance to the coast	0.131	-1.49	0.017	0.023	0.017	-0.004	0.036	0.034	0.148	0.152
	(0.413)	(0.919)	(0.062)	(0.063)	(0.039)	(0.03)	(0.093)	(0.13)	(0.091)	(0.099)
Border with Portugal	-1.473**	-4.888**	-0.131	-0.142	-0.086	-0.055	-0.271*	-0.333	-0.109	-0.233
	(0.723)	(2.349)	(0.13)	(0.11)	(0.108)	(0.073)	(0.151)	(0.257)	(0.288)	(0.259)
Altitude (average)	-0.002*	-0.011***	0.000	-0.0005**	-0.0003*	0.000	-0.001***	-0.001***	-0.001**	0.000
	(0.001)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Soil quality	-1.313	-1.647	0.677*	0.535***	0.669***	0.531***	0.21	1.349***	1.261***	0.619
	(1.683)	(3.477)	(0.364)	(0.181)	(0.182)	(0.13)	(0.479)	(0.436)	(0.428)	(0.388)
Mining output in 1860	-0.021	-0.098	0.005	0.005	-0.002	0	0.029**	0.006	0.015	0.018
	(0.064)	(0.141)	(0.008)	(0.006)	(0.004)	(0.003)	(0.013)	(0.011)	(0.012)	(0.013)

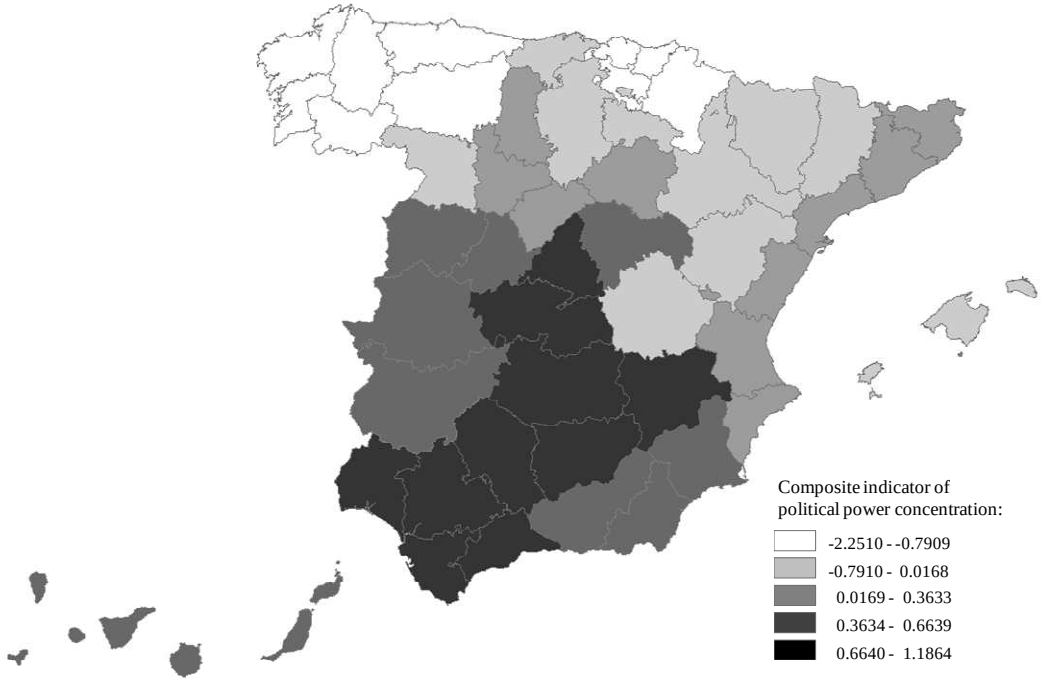
First stage statistics: Partial R^2=0.427; F-statistic=18.177; R^2=0.63; Number of observations=50.

Notes: Political power concentration is estimated as the first principal component of the variables: percentage of landless workers in 1797, percentage of villages under noble jurisdiction in 1797 and percentage of villages under military order jurisdiction in 1797. The first principal component is given by $PC_i = 0.7486*landless\_workers_i + 0.6454*noble\_jur_i + 0.1521*mil\_orders\_jur_i$, which explains 45.1 % of the variables variance. Variables descriptions are provided in Table A1. The estimations include a constant term, which is omitted for space considerations. Robust standard errors are in parentheses. Small-sample correction for standard errors is applied in 2SLS regressions. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.

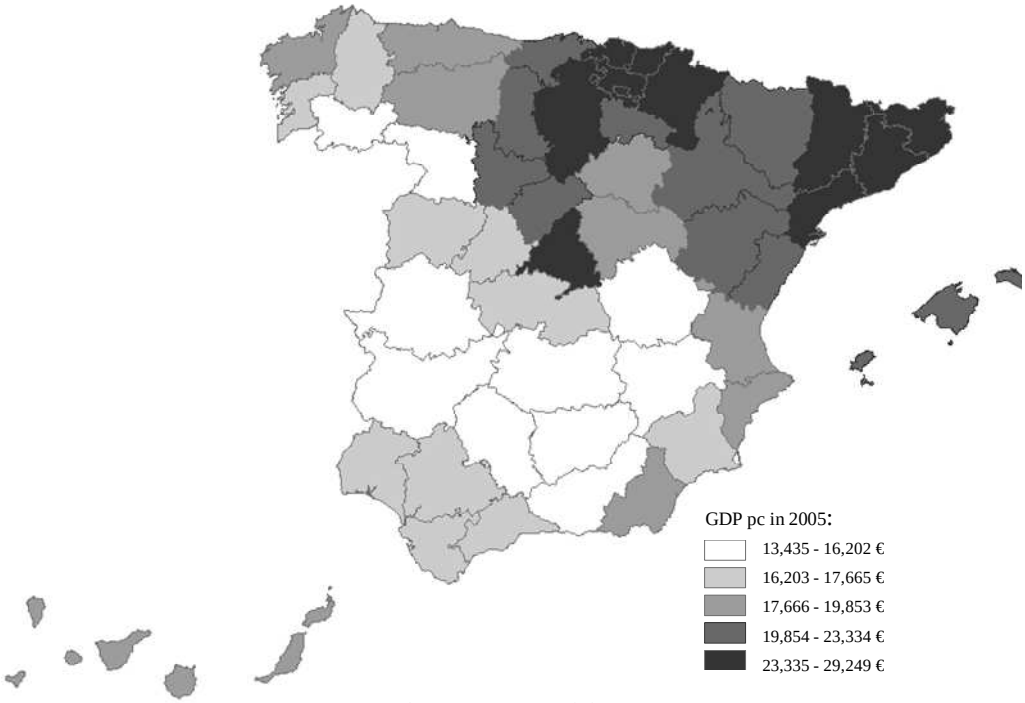
TABLE A6 -THE EFFECT OF THE RECONQUEST ON *DE FACTO* POLITICAL POWER AND *DE JURE* POLITICAL POWER

Dependent variable:	*De facto political power (percentage of landless workers in 1797)*			*De jure political power (percentage of villages and cities under seigneurial jurisdiction in 1797)*		
	(1)	(2)	(3)	(4)	(5)	(6)
Reconquered area	2.463***		1.429***	1.402***		0.795*
	(0.423)		(0.436)	(0.467)		(0.441)
Reconquest year		6.546***	4.11***		3.77***	2.416*
		(1.049)	(1.124)		(1.291)	(1.222)
Crown of Aragon	9.963*	0.527	5.721	5.757	0.375	3.264
	(5.304)	(5.6)	(5.52)	(6.471)	(5.925)	(6.082)
Madrid	12.911**	3.558	7.59*	17.12***	11.75***	13.993***
	(5.147)	(4.276)	(4.256)	(4.411)	(4.015)	(4.123)
Distance to the coast	1.474	6.423***	3.996*	7.157**	9.989***	8.639***
	(2.902)	(2.106)	(2.118)	(2.69)	(2.555)	(2.873)
Border with Portugal	-6.938	-0.924	-5.598	-1.525	1.862	-0.737
	(5.399)	(6.089)	(5.346)	(5.314)	(4.966)	(5.359)
Altitude (average)	0.002	-0.022**	-0.01	0.018	0.004	0.011
	(0.01)	(0.009)	(0.009)	(0.014)	(0.012)	(0.014)
Soil quality	26.622***	15.289	13.764	10.84	4.132	3.284
	(8.453)	(10.277)	(8.402)	(12.166)	(13.081)	(12.709)
Mining output in 1860	-0.201	0.487	0.187	-0.617**	-0.222	-0.388
	(0.286)	(0.328)	(0.29)	(0.282)	(0.257)	(0.261)
R^2	0.66	0.67	0.74	0.53	0.54	0.56
Number of observations	50	50	50	50	50	50

Notes: Variables descriptions are provided in Table A1. The estimations include a constant term, which is omitted for space considerations. Robust standard errors are in parentheses. *, ** and *** denote significance at the 10, 5 and 1% level, respectively.



Political power concentration in the 18th century



GDP pc in 2005

Figure A1. Political power concentration and current income distribution in the Spanish provinces

CHAPTER 5: CONCLUSIONS

In this thesis we have investigated the role that historical events may have played in affecting current economic performance across countries and across regions within a country. We have particularly focused on two major historical events, colonialism and the Spanish Reconquest. Historical facts are important to economists not only because it is interesting to know how history evolves and what effects it had on the past, but also – and mainly– because many consequences of remote historical facts persist today and shape our economic landscape. Regarding colonialism, we analyze the impact of this historical phenomenon on financial development and legal system quality. As shown in chapters 2 and 3, the transplantation of legal traditions by the European powers in their colonies had important consequences for the development of legal institutions and the creation of competitive financial markets. With respect to the Reconquest, we investigate in Chapter 4 the effect of this historical process on the concentration of economic and political power in the Spanish provinces and its consequences on current regional income distribution.

Chapter 2 extends the *law and finance theory* originated from the seminal papers of La Porta et al. (1997, 1998) by demonstrating heterogeneity in the interaction between legal traditions and endowments. We find that the effect of the common law on finance is conditioned by the level of endowments. Thus, for common law countries a negative relation between endowments and financial development is consistently observed. When one turns to civil law countries, the picture is quite different. We find that the impact of the civil law on finance does not depend on the level of endowments. This heterogeneity leads us to an interesting result in the relative effect of legal traditions: at low levels of endowments the common law is associated with higher financial development, but as the level of endowments rises, the difference between the British and French legal traditions shrinks and becomes statistically insignificant. In that case, the prediction by the *law and finance theory* that the common law tradition leads always to higher financial development than the French civil law tradition does no longer hold. Also, it is interesting to note that the *endowment theory* only fits with the group of common law colonies.

The different patterns of implantation of European legal systems in colonial territories are key to understanding the results. According to Zweigert and Kötz (1998), Britain transplanted its legal system in a heterogeneous way across its empire. Some territories received the British common law extensively (e.g., settler colonies) and developed the legal requirements for well-functioning financial markets. In other territories with large endowments the implantation of the British law was very superficial and the system of colonial administration known as indirect rule prevailed. This led to the concentration of power in the hands of traditional chiefs and to ineffective legal systems, with negative consequences for the development of financial markets. In contrast, France pursued legal assimilation throughout the empire and its colonial legal policies were set accordingly (Zweigert and Kötz). The French empire was more centralized than the British, and colonial dominions were considered as an intrinsic part of the Republic (Fieldhouse 1966). These particularities led to a more rigid and uniform application of the law across the empire, which can largely account for the fact that the impact of the French civil law on finance does not depend on initial endowments.

We make another contribution to the law and finance literature by arguing strongly in favor of distinguishing former Spanish colonies from the other civil law countries. We do so for a couple of reasons: 1) they share the legacy of the Spanish law tradition, which facilitated the reception of the Civil Code, and 2) all the Spanish American colonies imported the Civil Code by a common procedure, namely, imitation. The evidence supports our argument since former Spanish colonies show a higher level of financial development than those territories where the civil law was implanted by France itself. The effect of the Spanish law legacy is also independent of the level of initial endowments, which can be explained because Spain also applied Castilian laws uniformly across its American colonial possessions and all the American colonies adopted the Civil Code through voluntary transplant (Garro 1992, González 1992).

In Chapter 3 we try to make a contribution to the Legal Origin Theory by deepening into the key aspect of the distribution of legal traditions around the world. According to LLS (2008), four propositions are correct regarding the Legal Origins Theory: “First, legal rules and regulations differ systematically across countries [...] Second, these differences in legal rules and regulations are accounted for to a significant extent by legal origins. Third, the basic historical divergence in the styles of legal traditions [...]

explains well why legal rules differ. Fourth, the measured differences in legal rules matter for economic and social outcomes." (p. 326). This chapter qualifies points two and three. "[D]ifferences in legal rules and regulations" depend not just on legal origins but also on the way the mother country implanted the legal system in the recipient country. Incorporating this additional dimension is crucial to understand the relation between legal origins and legal rules. In fact, our results indicate that the superior performance of the common law in legal rules indicators (such as, for example, creditor rights, investor protection or contract enforcement -from the *Doing Business* dataset) is largely driven by countries where Britain extensively implanted its legal tradition. But in those places where the common law was hardly introduced, this legal tradition is not generally associated with better legal outcomes than the French civil law. Thus, to explain "why legal rules differ" one must consider both the contents or styles of legal traditions and the way they were distributed by the origin countries.

We argue that the process of distribution of the common law differed from that of the French civil law. The implantation of the common law was not uniform because Britain conducted a colonial strategy that did not seek to transfer its legal rules and institutions to territories politically organized and densely populated at the time of colonization, which normally had their own native rules. In contrast, France did introduce its legal system uniformly in its empire, irrespective of the initial conditions in each territory. This was due to the particular features of the French colonial empire, its centralism and bureaucratic control, and the ideology of assimilation that impregnated its colonial policy. We further argue that, by paying attention to the distribution of the French legal tradition, one can divide this legal family into three categories, depending on the way the Civil Code was received. In support of the claim that the French Civil Code was better received in Spanish American colonies than in French colonies, we generally observe that the former group enjoys higher creditor and investor rights and a more efficient legal system than the latter.

Finally, Chapter 4 is devoted to the analysis of the Spanish Reconquest, which is also a historical process similar to colonialism. We hold the view that the pattern of concentration of economic and political power resulting from the Reconquest in the Middle Ages is a major factor in shaping the regional income distribution of Spain. We use the timing and conditions surrounding the Reconquest of each province by the

Christian kingdoms as an instrument for the concentration of *de facto* and *de jure* political power. The 2SLS results indicate that the unequal distribution of economic and political power in society is able to explain a large part of the income differences existing among the Spanish provinces. Therefore, these income differences reflect a historical fact: the political inequality that regions with a high concentration of economic and political power in the hands of the landowning elite have suffered throughout several centuries. This created the conditions that led to the exclusion of large segments of the population from participating in the economic opportunities opened up with the arrival of industrialization. The result was that provinces featuring an unequal distribution of economic resources and political power fell behind during the process of industrialization.

These results are robust to controlling for historical controls and a wide array of climatic, geographic and natural resources endowments that account for simple and sophisticated versions of the geography hypothesis. It is of particular interest the lack of a significant effect from differences in land suitability for plantation crops featuring economies of scale in production. The results are also robust to controlling for the biogeographic conditions in the Neolithic and the transition to early agriculture, historical differences in culture and levels of human capital measured by the proportion of Moorish ancestry in the population of each province, the population density channel, the degree of market fragmentation or historical differences in religiosity across provinces. Instead, the evidence consistently points to differences in the concentration of economic and political power in the hands of a small landed elite emanating from the timing and conditions associated with the different stages of the Reconquest, which in turn exert a long-term influence on economic development. The Spanish case shows how persistent inequality in the distribution of economic and political power can become and the institutions and mechanisms behind this persistence, such as entailed estates protected by law or land concentration in ecclesiastical mortmain.

BIBLIOGRAPHY

Acemoglu, Daron, Maria Angelica Bautista, Pablo Querubin, and James A. Robinson. 2008. "Economic and Political Inequality in Development: The Case of Cundinamarca, Colombia." In *Institutions and Economic Performance*, edited by Elhanan Helpman. Cambridge, MA: Harvard University Press.

Acemoglu, Daron, Davide Cantoni, Simon Johnson, and James A. Robinson. 2011a. "The Consequences of Radical Reform: The French Revolution". *American Economic Review* 101: 3286–3307

Acemoglu, Daron, Isaías N. Chaves, Philip Osafo-Kwaako, and James A. Robinson. 2014. "Indirect Rule and State Weakness in Africa: Sierra Leone in Comparative Perspective." In *African Economic Successes*, edited by Sebastian Edwards, Simon Johnson and David Weil, Chicago: University of Chicago Press.

Acemoglu, Daron, and Simon Johnson. 2005. "Unbundling Institutions." *Journal of Political Economy* 113 (5): 949–95.

Acemoglu, Daron, Simon Johnson, and James A. Robinson. 2001. "The Colonial Origins of Comparative Development: An Empirical Investigation." *American Economic Review* 91 (5): 1369–401.

Acemoglu, Daron, Simon Johnson, and James A. Robinson. 2002. "Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution." *Quarterly Journal of Economics* 117 (4): 1231-1294.

Acemoglu, Daron, Simon Johnson, and James A. Robinson. 2005. "Institutions as a Fundamental Cause of Long-run Growth," in P. Aghion and S. Durlauf, eds., *Handbook of Economic Growth*, volume 1A, chapter 6, Elsevier, 865–934.

Acemoglu, Daron, Tarek A. Hassan, and James A. Robinson. 2011b. "Social Structure and Development: A Legacy of the Holocaust in Russia." *Quarterly Journal of Economics* 126: 895-946.

Acemoglu, Daron, Tristan Reed, and James A. Robinson. 2014. "Chiefs: Elite Control of Civil Society and Economic Development in Sierra Leone." *Journal of Political Economy*, forthcoming.

Acemoglu, Daron, and James A. Robinson. 2006. "De Facto Political Power and Institutional Persistence." *American Economic Review* 96 (2): 325-330.

Acemoglu, Daron, and James A. Robinson. 2010. "The Role of Institutions in Growth and Development." *Review of Economics and Institutions* 1 (2): 1-33.

Acemoglu, Daron, and James A. Robinson. 2012. *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. New York: Crown Publishers.

Adams, Susan M., et al. 2008. "The Genetic Legacy of Religious Diversity and Intolerance: Paternal Lineages of Christians, Jews, and Muslims in the Iberian Peninsula." *The American Journal of Human Genetics* 83: 725-736.

Afigbo. Adiele E. 1972. *The Warrant Chiefs: Indirect Rule in Southeastern Nigeria 1891-1929*. London: Longman.

Afigbo. Adiele E. 1985. "The Social Repercussions of Colonial Rule: The New Social Structures." In *General History of Africa VII: Africa under Colonial Domination 1880-1935*, Chapter 19, 487-507, edited by A. Adu Boahen. Berkeley: University of California Press.

Agencia Estatal de Meteorología. 2012. Valores Climatológicos Normales. (http://www.aemet.es/es/serviciosclimaticos/datosclimatologicos/valoresclimatologicos).

Albouy, David Y. 2012. "The Colonial Origins of Comparative Development: An Empirical Investigation: Comment." *American Economic Review* 102 (6): 3059–3076.

Alesina, Alberto, Reza Baqir, and William Easterly. 1999. "Public Goods and Ethnic Divisions." *Quarterly Journal of Economics* 114: 1243-84.

Alesina, Alberto, Arnaud Devleeschauwer, William Easterly, Sergio Kurlat, and Romain Wacziarg. 2003. "Fractionalization." *Journal of Economic Growth* 8: 155-94.

Alsan, Marcella. 2013. "The Effect of the Tse Tse Fly on African Development. Standford University." Mimeograph.

Alvarez-Palenzuela, Vicente A. 2002. "Enrique, Infante de Aragón, Maestre de Santiago." *Medievalismo: Revista de la Sociedad Española de Estudios Medievales* 12 (12): 37-89.

Angrist, Joshua D., and Jörn-Steffen Pischke. 2008. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press: Princeton.

Artola, Miguel, Antonio M. Bernal and J. Contreras. 1978. *El Latifundio. Propiedad y Explotación ss. XVIII-XX*. Madrid: Servicio de Publicaciones Agrarias.

Atlas Narodov Mira. 1964. *Atlas of the Peoples of the World*. Moscow, Glavnoe Upravlenie Geodezii i Kartografii.

Badunenko, Oleg and Diego Romero-Ávila. 1013. “Financial Development and the Sources of Growth and Convergence.” *International Economic Review* 54 (2): 629-663.

Bairoch, Paul. 1988. *Cities and Economic Development: From the Dawn of History to the Present*. Chicago, IL: University of Chicago Press.

Baland, Jean-Marie, and James A. Robinson. 2008. “Land and Power: Theory and Evidence from Chile.” *American Economic Review* 98 (5): 1737–1765.

Balas, Aron, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2009. “The Divergence of Legal Procedures.” *American Economic Journal: Economic Policy* 1: 138-62.

Banerjee, Abhijit, and Lakshmi Iyer. 2005. “History, Institutions, and Economic Performance: The Legacy of Colonial Land Tenure Systems in India.” *American Economic Review* 95: 1190-1213.

Bates, Robert H. 1983. “Modernization, Ethnic Competition, and the Rationality of Politics in Contemporary Africa”. 153-71 in *State versus Ethnic Claims: African Policy Dilemmas*, edited by Donald Rothchild and Victor A. Olunsorola. Boulder and Oxford: Westview Press.

Beck, Thorsten. 2012. “Legal Institutions and Economic Development”. In *Oxford Handbook of Capitalism*, 38-77, edited by Dennis Müller. Oxford: Oxford University Press.

Beck, Thorsten, George Clarke, Alberto Groff, Philip Keefer, and Patrick Walsh. 2001a. “New Tools in Comparative Political Economy: The Database of Political Institutions.” *World Bank Economic Review* 15 (1): 165–176.

Beck, Thorsten, Asli Demirgüç-Kunt, and Ross Levine. 2001b. “Legal Theories of Financial Development.” *Oxford Review of Economic Policy* 17: 483–501.

Beck, Thorsten, Asli Demirgüç-Kunt, and Ross Levine. 2003a. “Law, Endowments, and Finance.” *Journal of Financial Economics* 70: 137–81.

Beck, Thorsten, Asli Demirgüç-Kunt, and Ross Levine. 2003b. “Law and Finance: Why Does Legal Origin Matter?” *Journal of Comparative Economics* 31: 653–75.

Beck, Thorsten, Asli Demirgüç-Kunt, and Ross Levine. 2005. “Law and Firms’ Access to Finance.” *American Law and Economics Review* 7(1): 211-52.

Beck, Thorsten, Asli Demirgüç-Kunt, and Ross Levine. 2010. “Financial Institutions and Markets across Countries and over Time: The Updated Financial Development and Structure Database.” *World Bank Economic Review* 24: 77–92.

Beck, Thorsten, Asli Demirgüç-Kunt, and Vojislav Maksimovic. 2005. “Financial and Legal Constraints to Growth: Does Firm Size Matter?” *Journal of Finance* 60 (1): 137-77.

Beck, Thorsten, and Ross Levine. 2005. “Legal Institutions and Financial Development.” In *Handbook of New Institutional Economics*, 251-78, edited by Claude Ménard and Mary M. Shirley. Netherlands: Springer.

Belsley, David A., Edwin Kuh, and Roy E. Welsch. 2004. *Regression Diagnostics. Identifying Influential Data and Sources of Collinearity*. New Jersey: John Wiley & Sons.

Ben-Jua, Nantang. 1995. “Indirect Rule in Colonial and Postcolonial Cameroon.” *Paideuma* 41: 39-47.

Berkowitz, Daniel, Katharina Pistor, and Jean-Francois Richard. 2003a. “The Transplant Effect.” *American Journal of Comparative Law* 51: 163–203.

Berkowitz, Daniel, Katharina Pistor, and Jean-Francois Richard. 2003b. “Economic Development, Legality, and the Transplant Effect.” *European Economic Review* 47: 165–95.

Berry, Sara. 1992. “Hegemony on a Shoestring: Indirect Rule and Access to Agricultural Land.” *Africa: Journal of the International African Institute* 62: 327–55.

Betts, Robert F. 1985. “Methods and Institutions of European Domination.” In *General History of Africa VII: Africa under Colonial Domination 1880-1935*, Chapter 13, 312-31, edited by A. Adu Boahen. Berkeley: University of California Press.

Botero, Juan C., Simeon Djankov, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2004. “The Regulation of Labor.” *Quarterly Journal of Economics* 119: 1339–82.

Botero, Juan C., and Alejandro Ponce. 2010. “Measuring the Rule of Law.” The World Justice Project Working Paper no. 001. The World Justice Project, Washington, D.C.

Brenan, Geral. 1943. *The Spanish Labyrinth: An Account of the Social and Political Background of the Spanish Civil War*. Cambridge: Cambridge University Press.

Brown, L. Neville. 1956. “The Sources of Spanish Civil Law.” *International and Comparative Law Quarterly* 5: 364–77.

Bruhn, Miriam, and Francisco A. Gallego. 2012. “Good, Bad, and Ugly Colonial Activities: Do They Matter for Economic Development?” *Review of Economics and Statistics* 94: 433–61.

Burns, Robert I. 1973. *Islam under the Crusaders: Colonial Survival in the Thirteenth Century Kingdom of Valencia*. Princeton: Princeton University Press.

Cabrera Muñoz, Emilio. 1989. "The medieval Origins of the Great Landed Estates of the Guadalquivir Valley". *Economic History Review* 42 (4): 465-483.

Cabrera Muñoz, Emilio. 2006. "Feudalismo y Señoríos en Andalucía (Siglos XIII al XV)." In *Historia de Andalucía IV: El Nacimiento de Andalucía*, pp. 106-134, edited by Manuel González Jiménez. Barcelona: Planeta Editorial.

Cabrera Sánchez, Margarita. 2006. "Las Oligarquías Urbanas Andaluzas durante la Baja Edad Media." In *Historia de Andalucía IV: El Nacimiento de Andalucía*, pp. 240-245, edited by Manuel González Jiménez. Barcelona: Planeta Editorial.

Carreras, Albert. 2005. "Industria", In: Carreras, Albert, and Xavier Tafunell (Eds.) *Estadísticas Históricas de España. Siglos XIX-XX*, Fundación BBVA: Bilbao, pp. 357-453.

Carreras, Albert, Leandro Prados de la Escosura, and Joan R. Rosés. 2005. "Renta y riqueza", In: Carreras, Albert, and Xavier Tafunell (Eds.) *Estadísticas Históricas de España. Siglos XIX-XX*, Fundación BBVA: Bilbao, pp. 1297-1376.

Carrión, Pascual. 1975. *Los Latifundios en España. Su importancia, Origen. Consecuencias y Solución*. Barcelona: Ariel.

Casado Alonso, Hilario. 2002. "La Economía en las Españas Medievales (c. 1000 – c. 1450)." In *Historia económica de España: siglos X-XX*, edited by Comín, Francisco, Mauro Hernández y Enrique Llopis, Chapter 1, 13-50. Barcelona: Crítica, D.L.

Chaney, Eric. 2008. "Ethnic Cleansing and the Long-term Persistence of Extractive Institutions: Evidence from the Expulsion of the Moriscos". Harvard University Working Paper.

Chaney, Eric. 2013. "Revolt on the Nile: Economic Shocks, Religion, and Political Power." *Econometrica* 81 (5): 2033–2053.

Chaney, Eric, and Hornbeck, Richard. 2013. "Economic Growth in the Malthusian Era: Evidence from the 1609 Spanish Expulsion of the Moriscos". Harvard University Working Paper.

Chejne, Anwar G. 1999. *Historia de España Musulmana*. Madrid: Cátedra, D.L.

Chilver, Elizabeth M. 1963. "Native Administration in the West-Central Cameroon 1902-1954." 89-139 in *Essays in Imperial Government Presented by Margaret Perham*, edited by Kenneth Robinson and A. Frederik Madden. Oxford: Basil Blackwell.

Collantes de Terán Sánchez, Antonio. 2006. “Las Realidades Económicas y Sociales: El Mundo Urbano.” In *Historia de Andalucía IV: El Nacimiento de Andalucía*, edited by Manuel González Jiménez, pp. 48-79. Barcelona: Planeta Editorial.

Crowder, Michael. 1964. “Indirect rule –French and British Style.” *Journal of the International African Institute* 34: 197-205.

Crowder, Michael, and Obaro Ikime. (eds.) 1970. *West African Chiefs: Their Changing Status under Colonial Rule and Independence*. New York: Africana Publishing Corporation.

Dam, Kenneth W. 2006. “Legal Institutions, Legal Origins, and Governance.” John M. Olin Law & Economics Working Paper No. 303. The University of Chicago Law School, Chicago I.L.

Daniels, Ronald J., Michael J. Trebilcock, and Lindsey D. Carson. 2011. “The Legacy of the Empire: The Common Law Inheritance and Commitments to Legality in Former British Colonies.” *American Journal of Comparative Law* 59: 111–78.

de Vries, Jan. 1976. *The Economy of Europe in an Age of Crisis, 1600-1750*. Cambridge, UK: Cambridge University Press.

Dell, Melissa. 2010. “The Persistent Effects of Peru’s Mining Mita”. *Econometrica* 78 (6): 1863-1903.

Dell, Melissa. 2012. “Path Dependence in Development: Evidence from the Mexican Revolution.” Massachusetts Institute of Technology Working Paper, MIT.

Dewald, Jonathan. 2004. *Europe 1450 to 1789: Encyclopedia of the Early Modern World*. New York: Charles Scribner's Sons.

Digital Atlas of Roman and Medieval Civilizations. Version 1.1. Bishoprics ca. 600 (http://darmc.harvard.edu/icb/icb.do?keyword=k40248&pageid=icb.page188865).

Djankov, Simeon, Edward Glaeser, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2003a. “The New Comparative Economics.” *Journal of Comparative Economics* 31: 595–619.

Djankov, Simeon, Oliver D. Hart, Caralee McLiesh, and Andrei Shleifer. 2008a. “Debt Enforcement around the World.” *Journal of Political Economy* 116: 1105-49.

Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2002. “The Regulation of Entry.” *Quarterly Journal of Economics* 117: 1–37.

Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2003b. “Courts.” *Quarterly Journal of Economics* 118: 453–517.

Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2008b. “The Law and Economics of Self-Dealing.” *Journal of Financial Economics* 88: 430–65.

Djankov, Simeon, Caralee McLiesh, and Andrei Shleifer. 2007. “Private Credit in 129 Countries.” *Journal of Financial Economics* 84: 299–329.

Doing Business Project. 2012. International Finance Corporation, The World Bank, Washington, D.C. http://www.doingbusiness.org (last accessed June 20, 2012).

Domínguez-Ortiz, Antonio. 1955. *La Sociedad Española en el Siglo XVIII*. Madrid: Consejo Superior de Investigaciones Científicas, Instituto Balmes de Sociología.

Dominguez-Ortiz, Antonio. 1971. *The Golden Age of Spain, 1516-1659*. New York: Basic Books Inc. Publishers.

Easterly, William. 2007. “Inequality Does Cause Underdevelopment: Insights from a New Instrument.” *Journal of Development Economics* 84: 755–776.

Easterly, William, and Ross Levine. 2003. “Tropics, Germs, and Crops: How Endowments Influence Economic Development.” *Journal of Monetary Economics* 50: 3–39.

Easterly, William, and Ross Levine. 2012. “The European Origins of Economic Development.” NBER Working Paper no. 18162. National Bureau of Economic Research, Cambridge, Mass.

Engerman, Stanley L., and Kenneth L. Sokoloff. 1997. “Factor Endowments, Institutions, and Differential Paths of Growth among New World Economies.” In *How Latin America Fell Behind*, edited by Stephen Haber, 260–304. Stanford, CA: Stanford University Press.

Engerman, Stanley L., and Kenneth L. Sokoloff. 2000. “Institutions, Factor Endowments, and Paths of Development in the New World.” *Journal of Economic Perspectives* 14 (3): 217–232.

Engerman, Stanley L., and Kenneth L. Sokoloff. 2002. “Factor Endowments, Inequality, and Paths of Development among New World Economies.” *Economia* 3(1): 41–109.

FAO/IIASA. 2010. Global Agro-ecological Zones (GAEZ v3.0). FAO, Rome, Italy and IIASA, Laxenburg, Austria.

Fenske, James. 2014. “Ecology, Trade and States in Precolonial Africa.” *Journal of European Economic Association*, forthcoming.

Feyrer, James, and Bruce Sacerdote. 2009. “Colonialism and Modern Income: Islands as Natural Experiments.” *Review of Economics and Statistics* 91(2): 245–262.

Fieldhouse, David K. 1966. *The Colonial Empires: A Comparative Survey from the Eighteenth Century*. London: Weidenfeld and Nicolson.

Fieldhouse, David K. 1973. *Economics and Empire, 1830-1914*. London: Weidenfeld and Nicolson.

Fischer, G., F. Nachtergaele, S. Prieler, H.T. van Velthuizen, L. Verelst, D. Wiberg. 2008. "Global Agro-ecological Zones Assessment for Agriculture (GAEZ 2008)." IIASA, Laxenburg, Austria and FAO, Rome, Italy.

Fisher, Michael H. 1991. *Indirect Rule in India: Residents and the Residency System 1764-1858*. Delhi: Oxford University Press.

Forey, Alan J. 1984. "The Military Orders and the Spanish Reconquest in the Twelfth and Thirteenth Centuries". *Traditio* 40: 197-234.

Frankema, Ewout. 2010. "The Colonial Roots of Land Inequality: Geography, Factor Endowments, or Institutions?" *Economic History Review* 63 (2): 418–451

Gacto, Enrique, Juan A. Alejandre, and José M. García. 2003. *Manual Básico de Historia del Derecho*. Madrid: Laxes.

Gallup World Poll. 2013. Gallup Strategic Consulting: Gallup World Poll. Gallup World Headquarters, Washington, D.C., http://www.gallup.com (last accessed October 30, 2013).

Gallup, John L, Jeffrey D. Sachs, and Andrew D. Mellinger. 1999. "Geography and Economic Development." *International Regional Science Review* 22: 179–232.

Gallup, John L., Andrew D. Mellinger, and Jeffrey D. Sachs. 2001. "Geographic Datasets: Köppen-Geiger Climate Zones." Manuscript, Center of International Development, Harvard University.

Gann, Lewis, and Peter Duignan. 1967. *Burden of Empire: An Appraisal of Western Colonialism in Africa South of the Sahara*. Stanford, CA: Hoover Institution Press.

García de Cortázar, Fernando. 2007. *Historia de España Menéndez Pidal. Apéndice*. Madrid: Espasa Calpe.

García Fitz, Francisco. 2009. "La Reconquista: Un Estado de la Cuestión." *Clio & Crimen* 6: 142-215.

García-Ormaechea, Rafael. 2002. *Supervivencias Feudales en España. Estudio de Legislación y Jurisprudencia sobre Señoríos*. Pamplona: Urgoiti Editores.

Garro, Alejandro M. 1992. "Unification and Harmonization of Private Law in Latin America." *The American Journal of Comparative Law* 40: 587-616.

Gennaioli, Nicola, Rafael La Porta, Florencio Lopez-de Silanes, and Shleifer, Andrei. 2013. “Human Capital and Regional Development.” *The Quarterly Journal of Economics* 128 (1): 105-164.

Gennaioli, Nicola, and Ilia Rainer. 2007. “The Modern Impact of Precolonial Centralization in Africa.” *Journal of Economic Growth* 12: 185-234.

Glaeser, Edward L., and Andrei Shleifer. 2002. “Legal Origins.” *The Quarterly Journal of Economics* 117: 1193-229.

Glendon, Mary A., Paolo G. Carozza, and Colin B. Picker. 2008. *Comparative Legal Traditions in a Nutshell*. St. Paul, MN: Thomson/West.

Glendon, Mary A., Michael W. Gordon, and Christopher Osakwe. 1985. *Comparative Legal Traditions*. St. Paul, MN: West Group.

Glick, Thomas F. 1979. *Islamic and Christian Spain in the early Middle Ages*. Princeton: Princeton University Press.

González Jiménez, Manuel. 1989. “Frontier and Settlement in the Kingdom of Castile (1085-1350).” *In Medieval Frontier Societies*, edited by Robert Bartlett and Angus MacKay, pp. 49-74. Clarendon Press: Oxford.

González, Juan C. 1992. *Influencia del Derecho Español en América*. Madrid: MAPFRE.

Grafe, Regina. 2012. *Distant Tyranny: Markets, Power, and Backwardness in Spain, 1650-1800*. Princeton University Press: Princeton.

Guichard, Pierre. 2002. *De la Expansión Árabe a la Reconquista: Esplendor y Fragilidad de Al-Andalus*. Granada: Ed. Fundación El Legado Andalusí.

Hamilton, Peter J. 1917. “Germanic and Moorish Elements of the Spanish Civil Law.” *Harvard Law Review* 30: 303–18.

Hanke, Lewis. 1949. *The Spanish Struggle for Justice in the Conquest of America*. Philadelphia: University of Philadelphia Press.

Herbst, Jeffrey I. 2000. *States and Power in Africa: Comparative Lesson in Authority and Control*. Princeton, NJ: Princeton University Press.

Herr, Richard. 1958. *The Eighteenth-Century Revolution in Spain*. Princeton, New Jersey: Princeton University Press.

Heston, Alan, Robert Summers, and Bettina Aten. 2009. Penn World Table Version 6.3. Pennsylvania Center for International Comparisons of Production, Income and Prices, University of Pennsylvania, Philadelphia.

Hijmans, Robert J., Susan E. Cameron, Juan L. Parra, Peter G. Jones and Andy Jarvis. 2005. “Very High Resolution Interpolated Climate Surfaces for Global Land Areas.” *International Journal of Climatology* 25: 1965-1978.

Howe, William W. 1903. “Roman and Civil Law in America.” *Harvard Law Review* 16: 342–58.

IMF. 2013. International Financial Statistics Database. International Monetary Fund. Washington DC.

INE. 1982. *Censo de Población de las Provincias y Partidos de la Corona de Castilla en el Siglo XVI*. Ed. Facs. Madrid: Instituto Nacional de Estadística.

INE. 1992. *Censo de la población de España de el año 1797: Executado de Orden del Rey en el de 1801*. Madrid: Instituto Nacional de Estadística.

Instituto Geográfico Nacional. 2008. *Atlas Nacional de España*. (http://www.ign.es/ane/ane1986-2008/).

Iyer, Lakshmi. 2010. “Direct versus indirect colonial rule in India: Long-term consequences.” *Review of Economics and Statistics* 92 (4): 693-713.

Joireman, Sandra F. 2004. “Colonization and the Rule of Law: Comparing the Effectiveness of Common Law and Civil Law Countries.” *Constitutional Political Economy* 15: 315–38.

Junta General de Estadística. 1860. *Anuario Estadístico de España 1858*. Imprenta Nacional: Madrid.

Junta General de Estadística. 1863. *Anuario Estadístico de España 1860-1861*. Imprenta Nacional: Madrid.

Kaufmann, Daniel, and Andrew H. W. Stone. 2003. World Business Environment Survey Dataset. The World Bank Group, The World Bank, Washington D.C., http://go.worldbank.org/RV060VBJU0 (last accessed 30 October, 2013).

Kirk-Greene, Anthony H. M. 1980. “The Thin White Line: The Size of the British Colonial Service in Africa.” *African Affairs* 79: 25–44.

Klerman, Daniel, and Paul G. Mahoney. 2007. “Legal Origin?” *Journal of Comparative Economics* 35: 278–293.

Klerman, Daniel M., Paul G. Mahoney, Holger Spamann, and Mark I. Weinstein. 2011. “Legal Origin or Colonial History?” *Journal of Legal Analysis* 3: 379-409.

Kumar, Krishan. 2006. “English and French National Identity: Comparisons and Contrasts.” *Nations and Nationalism* 12: 413–32.

La Porta, Rafael, Florencio Lopez-de-Silanes, Cristian Pop-Eleches, and Andrei Shleifer. 2004. “Judicial Checks and Balances.” *Journal of Political Economy* 112: 445–70.

La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2002. “Government Ownership of Banks.” *Journal of Finance* 57: 265–301.

La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2006. “What Works in Securities Laws?” *Journal of Finance* 61: 1–32.

La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2008. “The Economic Consequences of Legal Origins.” *Journal of Economic Literature* 46: 285–332.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny. 1997. “Legal Determinants of External Finance.” *Journal of Finance* 52: 1131–50.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny. 1998. “Law and Finance.” *Journal of Political Economy* 106: 1113–55.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny. 1999. “The Quality of Government.” *Journal of Law, Economics and Organization* 15: 222–79.

Lange, Matthew. 2004. “British Colonial Legacies and Political Development.” *World Development* 32: 905–22.

Lange, Matthew. 2009. *Lineages of Despotism and Development: British Colonialism and State Power*. Chicago, IL: Chicago University Press.

Lange, Matthew, James Mahoney, and Matthias vom Hau. 2006. “Colonialism and Development: A Comparative Analysis of Spanish and British Colonies.” *American Journal of Sociology* 111: 1412–62.

Levine, Ross. 1997. “Financial Development and Economic Growth: Views and Agenda.” *Journal of Economic Literature* 35, 688–726.

Levine, Ross. 2005a. “Finance and Growth: Theory and Evidence.” In *Handbook of Economic Growth*, edited by Philippe Aghion and Steven Durlauf, pp. 865–934. North Holland: Elsevier.

Levine, Ross. 2005b. “Law, Endowments and Property Rights.” *Journal of Economic Perspectives* 19 (3), 61–88.

Licht, Amir N., Chanan Goldschmidt, and Shalom H Schwartz. 2005. “Culture, Law, and Corporate Governance.” *International Review of Law and Economics* 25: 229–55.

Lugard, Frederick D. (1919) 1970. *Political Memoranda*. London: Frank Cass.

Lugard, Frederick D. 1922. *The Dual Mandate in British Tropical Africa*. London: William Blackwood and Sons.

Mahoney, James. 2003. "Long-Run Development and the Legacy of Colonialism in Spanish America." *American Journal of Sociology* 109: 50–106.

Malefakis, Edward. 1970. *Agrarian Reform and Peasant Revolution in Spain. Origins of the Civil War*. New Haven: Yale University Press.

Mamdani, Mahmood. 1996. *Citizen and Subject*. Princeton, NJ: Princeton University Press.

Marshall, Monty G., Ted R. Gurr, and Keith Jaggers. 2010. "Polity IV Project: Political Regime Characteristics and Transitions, 1800-2009: Dataset Users' Manual." Manuscript, Center for Systemic Peace, Vienna.

Mercader, Juan, and Antonio Dominguez-Ortiz, 1972. "La Época del Despotismo Ilustrado." In *Historia de España y América Social y Económica*, edited by J. Vicens-Vives. Barcelona: Ediciones Vicens-Vives.

Merryman, John H. 1996. "The French Deviation." *American Journal of Comparative Law* 44: 109–19.

Mestre-Campi, Jesús, and Flocel Sabaté. 1998. *Atlas de la "Reconquista". La Frontera Peninsular entre los Siglos VIII y XV*. Barcelona: Ediciones Península.

Michaels, Ralf. 2009. "Comparative Law by Numbers? Legal Origins Thesis, Doing Business Reports, and the Silence of Traditional Comparative Law." *American Journal of Comparative Law* 57: 765-95.

Michalopoulos, Stelios, and Elias Papaioannou. 2013a. "National Institutions and Subnational Development in Africa." NBER Working Paper no. 18275, National Bureau of Economic Research, Cambridge, Mass.

Michalopoulos, Stelios, and Elias Papaioannou. 2013b. "Pre-colonial Ethnic Institutions and Contemporary African Development." *Econometrica* 81 (1): 113-52.

Migdal, Joel S. 1988. *Strong Societies and Weak States: State-society Relations and State Capabilities in the Third World*. Princeton, NJ: Princeton University Press.

Migdal, Joel S. 1994. "The State in Society: An Approach to Struggles of Domination." 7–36 in *State Power and Social Forces: Domination and Transformation in the Third World*, edited by Joel Migdal, Atul Kohli, and Vivienne Shue. New York: Cambridge University Press.

Mirow, Matthew C. 2001. “Borrowing Private Law in Latin America: Andrés Bello’s Use of the Code Napoleon in Drafting the Chilean Civil Code.” *Louisiana Law Review* 61: 291-329.

Mirow, Matthew C. 2004. *Latin American Law: A History of Private Law and Institutions in Spanish America*. Austin: University of Texas Press.

Mirow, Matthew C. 2005. “The Code Napoleon: Buried but Ruling in Latin America.” *Denver Journal of International Law and Policy* 33: 179–194.

Mitchell, Brian R. 2007a. *International Historical Statistics. Europe, 1750-2005*. Palgrave: Hampshire.

Mitchell, Brian R. 2007b. *International Historical Statistics. The Americas, 1750-2005*. Palgrave: Hampshire.

Molina-Recio, Raúl. 2007. “Nobleza y Poder Señorial. Los Señoríos Andaluces de los Fernández de Córdoba en la Edad Moderna: Territorio, Población y Economía.” In *Los señoríos en la Andalucía Moderna. El Marquesado de los Vélez,* edited by Francisco Andújar Castillo and Julián P.Díaz López, p. 795-815.

Morales, Antonio. 1998. *Las Bases Políticas, Económicas y Sociales de un Régimen en Transformación (1759-1834).* Madrid: Espasa Calpe.

Murdock, George P. 1967. *Ethnographic Atlas*. Pittsburgh: Pittsburgh University Press.

Nadal, Jordi. 1975. *El Fracaso de la Revolución Industrial en España, 1814-1913*. Barcelona: Ariel.

Naritomi, Joana, Rodrigo R. Soares, and Juliano L. Assunçao. 2012. “Institutional Development and Colonial Heritage within Brazil.” *Journal of Economic History* 72 (2): 393-422.

North, Douglass C. 1990. *Institutions, Institutional Change, and Economic Performance*. Cambridge, UK: Cambridge University Press.

Nunn, Nathan. 2008. “Slavery, Inequality, and Economic Development in the Americas: An Examination of the Engerman-Sokoloff Hypothesis.” In *Institutions and Economic Performance*, edited by Elhanan Helpman, Cambridge, MA: Harvard University Press.

Nunn, Nathan. 2009. “The Importance of History for Economic Development.” *Annual Review of Economics* 1: 65–92.

Nunn, Nathan. 2014. “Historical Development,” In *Handbook of Economic Growth*. Vol. 2., edited by Philippe Aghion and Peter Durlauf, North-Holland, forthcoming.

Olsson, Ola. 2009. “On the Democratic Legacy of Colonialism.” *Journal of Comparative Economics* 37: 534–51.

Olsson, Ola, and Christopher Paik. 2013. “A Western Reversal since the Neolithic? The Long-run Impact of Early Agriculture.” Working Paper, Gothenburg University.

Oto-Peralías, Daniel, and Diego Romero-Ávila. 2013. “Styles of Imperialism and the Consequences of European Colonialism on Institutional Development.” Unpublished manuscript, Pablo de Olavide University, Department of Economics, January.

Oto-Peralías, Daniel, and Diego Romero-Ávila. 2014. “Legal Traditions and Initial Endowments in Shaping the Path of Financial Development.” *Journal of Money, Credit and Banking* 46 (1): 43-77.

Ottley, Bruce. 1995. “Looking Back to the Future: The Colonial Origins of Current Attitudes toward Customary Law.” 97-107 in *Custom at the Crossroads*, edited by J. Alleck and J. Rannells. Port Moresby: Faculty of Law, University of Papua New Guinea Press Services.

Pascual, Pere, and Sudriá, Carles. 2002. “El Difícil Arranque de la Industrialización.” In *Historia económica de España: Siglos X-XX*, edited by Comín, Francisco, Mauro Hernández y Enrique Llopis, Chapter 6, 203-241. Barcelona: Crítica, D.L.

Pérez Boyero, Enrique. 2006. “La Creación de los Señoríos en el Reino de Granada (1490-1516).” In *Historia de Andalucía V: El Reino Nazarí y la Formación de la Nueva Andalucía*, pp. 259-267, edited by Manuel González Jiménez and José Enrique López de Coca Castañer. Planeta Editorial: Barcelona.

Perham, Margery. 1934a. “Some Problems of Indirect Rule in Africa.” *Journal of the Royal Society of Arts* 4252 (82): 689-710.

Perham, Margery. 1934b. “A Re-Statement of Indirect Rule.” *Africa: Journal of the International African Institute* 7: 321-34.

Pinhasi, Ron, Joaquim Fort, and Albert J. Ammerman. 2005. “Tracing the Origins and Spread of Agriculture in Europe”. *PLOS Biology* 3(12): 2220-2228.

Pistor, Katharina. 2009. “Rethinking the ‘Law and Finance’ Paradigm.” *Brigham Young University Law Review* 2009 (6): 1647-70.

Rajan, Raghuram G., and Luigi Zingales. 1998. “Financial Dependence and Growth.” *American Economic Review* 88: 559–586.

Rajan, Raghuram G., and Luigi Zingales. 2003. “The Great Reversals: The Politics of Financial Development in the Twentieth Century.” *Journal of Financial Economics* 69: 5–50.

Ramankutty Navin, Jonathan A. Foley, John Norman, and Kevin McSweeney. 2002. "The Global Distribution of Cultivable Lands: Current Patterns and Sensitivity to Possible Climate Change." *Global Ecology and Biogeography* 11: 377-92.

Reglá, Juan. 1972a. "La Época de los Tres Primeros Austrias." In *Historia de España y América Social y Económica*, edited by J. Vicens-Vives. Barcelona: Ediciones Vicens-Vives.

Reglá, Juan. 1972b. "La Época de los 2 Últimos Austrias." In *Historia de España y América Social y Económica*, edited by J. Vicens-Vives. Barcelona: Ediciones Vicens-Vives.

Reher, David-Sven. 1990. *Town and Country in Pre-industrial Spain*. Cambridge: Cambridge University Press.

Richens, Peter. 2009. "The Economic Legacies of the 'Thin White Line': Indirect Rule and the Comparative Development of Sub-Saharan Africa." *African Economic History* 37: 33-102.

Robins, Simon. 2009. "A Place for Tradition in an Effective Criminal Justice System. Customary Justice in Sierra Leone, Tanzania and Zambia." *Policy Brief* 17, Institute for Security Studies, Pretoria.

Rodríguez Molina, José. 2000. "Convivencia de Musulmanes y Cristianos en la Frontera de Granada." In *La Paz en la Historia*, Instituto de la Paz y los Conflictos, Granada, pp. 203-205.

Roe, Mark J. 2006. "Legal Origins, Politics, and Modern Stock Markets." *Harvard Law Review* 120: 460–527.

Roe, Mark J., and Jordan I. Siegel. 2009. "Finance and Politics: A Review Essay Based on Kenneth Dam's Analysis of Legal Traditions in the Law–Growth Nexus." *Journal of Economic Literature* 47: 781–800.

Rosés, Joan R. 2006. "La Primera Etapa de la Industrialización." In *Historia Económica de España*, edited by Agustín Gonzalez Enciso and Juan M. Matés Barco, Chapter 7, 185-207. Barcelona: Ariel.

Rosés, Joan R., Julio Martínez-Galarraga, and Daniel A. Tirado. 2010. "The upswing of regional income inequality in Spain (1860–1930)". *Explorations in Economic History* 47: 244–257.

Ruiz-Maya, Luis. 1979. "Sobre el origen histórico de la concentración de la tierra: una aproximación estadística." *Agricultura y Sociedad* 10: 9-103.

Sachs, Jeffrey D. 2003. “Institutions don’t Rule: Direct Effects of Geography on per Capita Income”, NBER Working Paper. No. 9490. Cambridge, MA: National Bureau of Economic Research.

Sachs, Jeffrey, and Andrew Warner. 1995. “Economic Reform and the Process of Global Integration. ” *Brooking Papers on Economic Activity* 1: 1-95.

Sánchez Albornoz, Claudio. 1932. *La Reforma Agraria ante la Historia*. Madrid: Tipografía de Archivos.

Schmidhauser, John R. 1992. “Legal Imperialism: Its Enduring Impact on Colonial and Post-colonial Judicial Systems.” *International Political Science Review* 13 (3): 321-34.

Simón, Francisco. 1973. *La Desamortización Española del siglo XIX*. Madrid: Instituto de Estudios Fiscales. Ministerio de Hacienda.

Sobrequés. 1972. “La Baja Edad Media Peninsular.” In *Historia de España y América Social y Económica*, edited by J. Vicens-Vives. Barcelona: Ediciones Vicens-Vives.

Sokoloff, Kenneth L., and B. Zorina Khan. 1990. “The Democratization of Invention during Early Industrialization: Evidence from the United States, 1790–1846.” *Journal of Economic History* 50 (June): 363–78.

Spamann, Holger. 2010a. “Contemporary Legal Transplants —Legal Families and the Diffusion of (Corporate) Law.” *BYU Law Review* 2009 (6): 1813–1878.

Spamann, Holger. 2010b. “The ‘Antidirector Rights Index’ Revisited.” *Review of Financial Studies* 23: 467-86.

Spamann, Holger. 2010c. “Legal Origins, Civil Procedure, and the Quality of Contract Enforcement.” *Journal of Institutional and Theoretical Economics* 166: 149-65.

Spolaore, Enrico and Roman Wacziarg. 2013. “How Deep Are the Roots of Economic Development?” *Journal of Economic Literature* 51 (2): 325-369.

Staiger, Douglas, and James H. Stock. 1997. “Instrumental variables regression with weak instruments.” *Econometrica* 65: 557–86.

Stulz, René M., and Rohan Williamson. 2003. “Culture, Openness, and Finance.” *Journal of Financial Economics* 70: 313–49.

Teorell, Jan, and Axel Hadenius. 2005. “Determinants of Democratization: Taking Stock of the Large-N Evidence.” Unpublished manuscript. Department of Government, Uppsala University, Uppsala.

Teorell, Jan, Marcus Samanni, Sören Holmberg, and Bo Rothstein. 2011. “The Quality of Government Dataset, Version 6Apr11.” Manuscript, The Quality of Government Institute, University of Gothenburg, http://www.qog.pol.gu.se.

Truxillo, Charles A. 2001. *By the Sword and the Cross: The Historical Evolution of the Catholic World Monarchy in Spain and the New World, 1492-1825*. Greenwood Press, London.

van Vollenhoven, Joost V. 1920. “Circulaire au Sujet des Chefs Indigènes.” In *Une Âme de Chef*. Paris: Dieval.

Vicens Vives, Jaime. 1969. *An Economic History of Spain*. Princeton: Princeton University Press.

Voigtländer, Nico, and Hans-Joachim Voth. 2013. “The Three Horsemen of Riches: Plague, War, and Urbanization in Early Modern Europe.” *Review of Economic Studies* 80: 774-881.

Weber, Max. (1904-1905) 1976. *The Protestant Ethic and the Spirit of Capitalism*. London: Allen and Unwin.

Whittlesey, Derwent. 1937. “British and French Colonial Technique in West Africa.” *Foreign Affairs* 15: 362-73.

Woodberry, Robert D. 2004. “The Shadow of Empire: Christian Missions, Colonial Policy, and Democracy in Post-colonial Societies.” Ph.D. diss. University of North Carolina-Chapel Hill, North Carolina.

Woodberry, Robert D. 2012. “The Missionary Roots of Liberal Democracy.” *American Political Science Review* 106(2): 244-74.

World Bank. 2011. World Development Indicators 2011 Database. Washington, DC: World Bank Publishing Services.

World Bank. 2013. Enterprise Surveys. World Bank Group and International Finance Corporation, Washington D.C., http://www.enterprisesurveys.org (last accessed October 30, 2013).

Wylie, Kenneth. 1977. *Political Kingdoms of the Temne*. London: Holmes and Meier Publishers.

Young, Crawford. 1988. “The African Colonial State and Its Political Legacy.” 25–66 in *The Precarious Balance: State and Society in Africa*, edited by Naomi Chazen and Donald Rothchild. Boulder and Oxford: Westview Press.

Zweigert, Konrad, and Hein Kötz. 1998. *An Introduction to Comparative Law*. Oxford: Clarendon Press.